





AN ESSAY

ON

VALUE

WITH

A SHORT ACCOUNT

OF

AMERICAN CURRENCY

BY
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ERRATA.

Page 25, ninth line from bottom:

$\frac{n \pm p}{m \pm}$ should read $\frac{n \pm p}{m \pm q}$.

Page 56, ninth line from bottom:

$i + x + h < \frac{n}{m}$ should read $i + x + h > \frac{n}{m}$.

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CONTENTS.

	PAGE.
I. Utility,	5
II. Use Value,	8
III. Relative Value,	22
IV. Exchange Value,	23
V. Market Value,	32
VI. Natural Value,	52
VII. Money Value,	130
VIII. American Currency,	148
A NATIONAL CURRENCY,	178

VALUE.

In economics a correct idea of value is said to be of the utmost importance; for from no source do so many errors and so much difference of opinion in that science proceed as from the vague ideas which are attached to the word value. (Ricardo, Chap. I.) The meaning of the word utility seems to lack precision also, and because of its relation to the word value will be first noticed.

I.

UTILITY.

Utility has been defined as a capacity to satisfy a desire, or serve a purpose; and wealth has been defined as utilities embodied in material objects. As thus defined, the utility of a thing is supposed to be inherent in it, and is a constant quantity; for the potential capacity of a thing to satisfy a want or serve a purpose would exist and continue to be the same whether the want or purpose existed or not. A pound of iron, a bushel of grain, or a yard of cloth would contain as much utility at one time and place as at another; as much in the

hands of its producer as in those of a consumer, and, in fact, the same amount, whether there was a consumer at all or not; the utility of coal would be no more increased by carrying it from than to Newcastle. A superfluity of anything would contain as much utility, per unit of quantity, as a scarcity. A gallon of water would contain a certain quantity of utility, and a deluge an infinite quantity of it. The relative utility of any two commodities per units of quantity would be the same everywhere and to everybody; the relative utility of grain and cloth would be the same in Dakota as in New England. In every exchange there would be a transfer of equal or unequal utilities; in the first of which cases neither party would gain anything, and in the second, one party would gain and the other lose.

The same thing has a capacity to be injurious as well as useful. A small quantity of water will quench a man's thirst or suffocate him; a small fire will warm him or burn him seriously. Where is the utility of water in floods, fire in a conflagration, or air in a cyclone?

A capacity to satisfy a desire or serve a purpose implies the existence of the use or purpose and has a relation thereto; even a potential utility has reference to a potential use or purpose. Since the actual utility of an object depends upon the existence of a demand for it, the degree of its utility, per unit of quantity, depends upon how much it is wanted; therefore, actual utility is a

variable and not a constant quantity; and the relative utility of any two things, per units of quantity, varies from time to time and place to place, to the same person, and to different persons.

Using the word utility in a loose, general, and indefinite sense, it has been said that: "The utility of an object consists in its quality of being useful for human purposes generally, and the degree of its utility is to be measured by the importance of such purposes," and, therefore, "water, coal, or iron is more useful than alcohol, gold, or diamonds."

While this may be useful information, it is more important to everyone to determine from time to time the relative utility to him, per units of quantity, of any two commodities than to ascertain that one of them is more useful than the other for human purposes generally. In fact, everyone, in dealing with commodities, consults his own interest and acts on his own behalf; and to that end he estimates their relative utility to him for specific amounts of each at the time, and from time to time, and does not govern his conduct by any loose notions which he or others may entertain as to their general utility to mankind. If he had a hollow tooth, he would probably consider enough gold to fill it and preserve the tooth to be more useful to him for that purpose than a ton of water, coal, or iron; or, if he required a certain quantity of alcohol for some

purpose in the arts or in medicine, for which alcohol was suitable and water unsuitable, that alcohol was more useful to him for that purpose than water. A coat would evidently be more useful to a man who had none, especially in winter, than to a dealer in coats who had more than he could use or sell; and a loaf of bread would be more useful to a hungry man than to a baker who had an overstock. So, also, a surplus of grain and provisions would be less useful to their producers than to others who lacked food and needed such supplies; also, a surplus of cloth and hardware would be less useful to their producers than food and other things which they wanted. And if a person had more of those things which are called necessities than he could use or consume before they would spoil or decay, he might justly consider a useless, cumbersome, and perishable superfluity of them to be of less utility to him than a comparatively small quantity of gold, or even an imperishable and brilliant diamond.

II.

USE VALUE.

Anything which can satisfy a man's desire, need, use, or purpose—that is to say, his want or wants—has value to him, or a use value; which phrase is here employed to signify the value of a thing to one person only, or to each person

separately. Value is not inherent in a thing, for the want is external to it. A want, as hunger or thirst, can exist in the absence of any means to satisfy it; but in the absence of any want, use, or purpose to which a thing can be applied, it has no actual value, and any such quality which may be imputed to it is merely potential or imaginary. In fact, value exists only when there is a want and a means available to satisfy it. Treasure sunk in the ocean has no actual value; to a man in a desert, water in the clouds or elsewhere has no actual value. The Garden of Eden had an actual value to Adam while he was in it, and only a potential value to him after he was put out of it.

A thing may have a use value for the purpose of satisfying an imaginary want; quack medicines may cure imaginary ills, and furnish cheap substitutes for the bones and relics of the saints, holy shrines, pretended relics of the true cross, and the holy coat of Treves. Formerly the catacombs of Rome had nearly as great a value to the Church as her treasury of good works. If the owner of a gem finds that it is bogus, or of a picture that it is a copy, its value to him declines. When the turquoise ceases to be a talisman against the "evil eye," the stone will lose in use value to the Persian; so, also, as to all fetiches, charms, and amulets.

The value of a thing to anyone includes all the uses and purposes to which it can be applied by

him; e. g., grain has a use value for seed, food, manufacture, and also for the purpose of exchange for other things. Also, the same thing may have a value to different persons for different purposes. The value of a commodity to a merchant lies in the profit which he can obtain by dealing in it, while the value of opium, tobacco, coffins, or any other thing to its consumer is quite different. The product of one person may be the tools or raw material of another. A thing may have a present value for the purpose of satisfying a future want. A prudent man provides beforehand for his future wants, especially those which are recurrent and involuntary; and, therefore, he stores away corn in his granary, food in his larder, and riches in his treasury, because of their value to him for consumption and exchange, present and prospective.

Use value is a variable quantity: The supply and the demand are both variable.

The supply varies:

In quality—A good timepiece is more useful than a poor one; cloth may be all wool or partly waste or shoddy. Nearly all commodities vary in quality. There are more than 100 grades of wool; the same fleece sorts into seven or more qualities. In the Chicago market there is red and white wheat, winter and spring, divided into about twenty grades; of Indian corn there are ten grades; oats, six grades; barley, five grades; butter, six or more grades; cattle of numerous grades.

In quantity—The supply may vary from nothing to a superabundance. There may be too much of such a useful thing as water. A person may have no food, or barely enough to sustain life, or more than he can consume before it will spoil. In some parts of the country, when newly settled, Indian corn has been used for fuel, and fruit so abundant as to be left to rot on the ground; the potato crop of 1895 was so abundant as not to be worth digging in places remote from market, being worth at Chicago, in the early spring of 1896, about 16 cents per bushel by the car load. Formerly, in Australia, the surplus carcasses of sheep were used for fuel and the ashes sold as a fertilizer; and surplus cattle in South America had no value except for their hides and tallow. An excess of anything beyond what its owner can use or consume himself before it will spoil or decay, has no value to him except to exchange for something else which he wants or desires.

The demand varies:

A person may be more hungry or thirsty at one time than at another, or want clothing more when it is cold than when it is warm. He usually wants any necessary, useful, or agreeable thing more when he has none of it than when he is partially supplied. Beyond the point of necessity, the intensity of his desire usually decreases as the supply increases up to the limit of extreme abundance.

Use Value, Its Existence and Degree.

Its existence depends solely upon a demand and an available supply, and not upon the source of the supply or its cost of production.

Cost is the sacrifice made to procure a thing; value is the benefit which can be derived from it, which is the same whether the thing costs much, little, or nothing. Water derived from the clouds or a living spring has the same value to quench thirst, or for any other purpose, as if the same water had been filtered or distilled out of some solution. A lump of gold has the same value to its finder as if he had obtained it after great labor. A coat will keep a man as warm if it be a gift as if it were acquired at great cost. Cloth woven on a hand-loom has no greater value than if the same cloth had been woven on a loom propelled by wind, water, or steam. No sensible person would consider the same thing to be of greater value to him merely because it was produced at great cost. If a thing is not wanted it has no actual value, whether its cost was much or little.

But a demand converts a potential into an actual supply. "The paving of the streets of London enabled the owners of some barren rocks on the coast of Scotland to draw a rent from what never afforded a rent before; also, the forests of Norway found a market in Great Britain which they could not find at home; also, the sur-

plus wool of England found a market in Flanders, and, after the Union, the Highland cattle found a market in England; those bred on the most uncultivated moors, in proportion to their weight and goodness, brought the same price as those raised upon the most improved land." (Wealth of Nations.)

The degree of the use value of a supply, per unit of quantity, depends solely upon its quality, and its quantity relative to the demand for it, increasing with its quality and decreasing as its quantity increases.

Quality may be due to soil and climate, as in fruits, cotton, coffee, etc.; or to lapse of time, which improves coffee, wine, and distilled liquors, and injures fruit, meat, and other things; or to the care, skill, and honesty exercised in the production of a thing.

Scarcity and abundance have the same effect upon the degree of use value, whether the cause is natural or artificial, as a siege, blockade, or a corner in the article. In Egypt, during the years of plenty, food was of little worth; but during the years of scarcity Pharaoh acquired all the property of the Egyptians and reduced them to slavery, although there was grain enough in Egypt to feed its people, and also to supply others.

Wants. Adam Smith said: "A man is rich or poor according to the degree in which he can afford the necessities, conveniences, and amusements of human life."

A savage and a civilized man differ in their notions about wealth. To each of them food and drink of some kind are clearly necessaries ; clothing and shelter may not be, for a part of mankind go naked and lie on the ground. As a man acquires knowledge his views alter and his wants multiply. Knowledge discovers needs and wants, and also the means to satisfy them. The first hut was a luxury ; the first clothing, the first fire, the first salt, etc.

During "the ages of faith" those who aspired to be saints believed in mortifying the flesh. Some never washed themselves, nor disturbed the vermin with which they were infested ; so far as they caused pain they were increasing the stock of the aspirant's merits ; that treasure which he was laying up in heaven. Greater knowledge has caused piety to assume a more rational form. It is not now deemed essential to a saint that he should be dirty and lousy, or a nest of microbes and bacteria, nor that the temple of God should be a charnel house. Now the wise man prefers a good house well aired to a cave or a hole in the ground ; food in wholesome variety, well cooked, to raw fish or flesh ; suitable and clean clothes to dirty rags and skins ; and is glad if he can justly acquire the means to satisfy his voluntary and involuntary, natural and acquired, present and prospective, real and imaginary wants.

Cost and Use Value. If nature had supplied everything which is wanted, as a free gift, every

want would find full satisfaction in a gratuitous supply. But when the acquisition of a thing involves cost, the demand for it becomes stinted towards the point where it would be as easy to endure the want, or so much of it as remained unsatisfied, as to gratify it. If a person feels a want, as hunger or thirst, it causes pain; and if he has not the means at hand to satisfy it, the want impels him to undergo the sacrifice necessary to obtain the requisite supply. This sacrifice also causes pain. By labor a man is said to lay down a part of his ease, liberty, and happiness; by outlay he parts with what cost him something to acquire, and deprives himself of the benefit which he might otherwise obtain from it. Every sensible person usually considers how great a sacrifice he must make in order to gratify his various wants, and as the price which he must pay seems to him to be greater or less than its reward he acts accordingly.

The sensations produced by a want, by its gratification, and by the cost of appeasing it, are not the same to every person, for men differ in their mental and physical powers, natural and acquired; they differ not only in ability, but in their feelings, tastes, and inclinations. Even a future want renders an industrious and frugal man nervous and unhappy until he has made provision for it. He anticipates his future wants, and will not wait until the spur of necessity is actually applied; for experience teaches him that

it requires time as well as effort and sacrifice to obtain the requisite supply; and he is unwilling to rely on chance, charity, or theft to supply his wants as they occur. Other persons can not restrain their desires, have no frugality, and live in poverty because of their wasteful extravagance. Others regard labor as a dreadful sacrifice, and will suffer for want of food, clothing, and shelter rather than undergo the great pain which they would suffer in order to satisfy their wants by their own industry. The Pilgrims landed among the rocks of New England in December, 1620; they were assisted to migrate, but by 1637, if not earlier, they were taxing themselves to support the poor, and afterwards indulged in expensive litigation as to which town ought to support some particular pauper. Now he travels not only from one town to another, but from Maine to Oregon, having no use for a tract of wild land, unless for the scenery, although offered as a gift. In 1894 crowds of tramps seized railroad trains and marched on Washington, feeding on the industry of the country by the way. At Chicago, during the winter of 1893-4, with bricklayers' wages at 50 cents an hour; carpenters', 35 cents an hour; common labor at \$1.50 to \$1.75 for an eight-hour day; patent flour at \$4.50 per barrel; "bakers'" ditto at half that price, and thousands of dram shops, each paying a license of \$500 per annum, the Relief and Aid Society called upon the charitable for about \$2,300 per day to support the needy.

Formerly a very rich man said, the drunkard and the glutton come to poverty, and sloth clothes a man in rags and his family also.

It is asserted that wealth would yield the greatest amount of happiness if it were equally divided; how often a redivision would be necessary in order to maintain the equality is not stated. But one might surmise that, if those who love industry and frugality the most were required to acquire the wealth, and those who derive the greatest enjoyment from its consumption and who love labor and frugality the least, were employed as consumers, a much greater sum of happiness might be realized. Heavy taxation of everybody who has anything renders this scheme quite feasible.

It is said that "the real price of everything, what everything costs to the man who wants to acquire it, is the toil and trouble of acquiring it." But neither this price nor the value of the thing when acquired is the same to everybody. One person may want a thing more than another, acquire it for less, and obtain a greater satisfaction from it. The same person does not always obtain the same thing at the same cost. A hunter or fisherman would undergo the same amount of toil and trouble whether he killed or caught anything or not; so also with a miner whether he dug in rich or barren ground; or a farmer whether his crop was good or poor. A person engaged in any occupation after a certain period of time

would form his opinion whether his total reward compensated him for the total sacrifice; and whatever was the result he would adopt an easier or more lucrative occupation if he could find it. In some way satisfactory to himself he might strike an average, and thereupon say that in the ordinary state of his health, strength, and spirits, in the ordinary exercise of his skill and dexterity, and in the usual degree of hardship caused by the elements, the nature of the business and otherwise, he obtained an average reward for an average sacrifice. But the standard by which he measured and compared the two would not measure the same amount of cost or reward to others who were unlike him, each of whom would have an equal right to compare his sacrifices with his enjoyments and to act accordingly.

In the science of political economy it is assumed that all men are exactly alike, or so near alike that any differences between them may be ignored. This fallacy makes the science unsound; the subject may be thereby simplified and made easy for new beginners, but the reasoning founded upon this false assumption fails to apply to the facts as they exist.

Adam Smith said that the difference of natural talents in different men is in reality much less than we are aware of; that the difference between a philosopher and a street porter, for example, seems to arise, not so much from nature as from habit, custom, and education; that the two from

nature are not half so different as a mastiff is from a greyhound, or it from a spaniel, or this last from a shepherd's dog. But since there is a material difference between an idiot and a Sir Isaac Newton, and between a Samson and one who has the rickets, with gradations between the two extremes, and a great difference between races or breeds of men, it is immaterial whether the difference from nature between men is less than it is between dogs. The difference between Napoleon and the generals he defeated was not due to custom, habit, and education; the difference between General Grant and other generals who were total failures was a material and natural difference.

A person of equal authority with Adam Smith, to wit, the Pope, in his encyclical letter on the Condition of Labor, says it is impossible to reduce human society to a level, because there naturally exist among mankind innumerable differences of the most important kind; that people differ in capability, in diligence, in health, and in strength. This being manifestly true, the Pope, by his letter, knocked the "hypothetical economic man" in the head, and reduced every system of political economy which is founded on the tacit or express assumption that all men are exactly alike, to mere rubbish fit only for the dunghill.

Among mankind there naturally exist all sorts of men, including such as Cain, Esau, Canaan, Judas, the prodigal son, the wicked husbandmen,

and the idle servant who hid in the earth the talent entrusted to him. Eternal happiness is offered to all, but many are unwilling to pay the price for it.

Much ingenuity has been expended in devising schemes whereby everyone will suffer an equal amount of sacrifice for an equal amount of satisfaction. Instead of allowing everyone to measure and compare the two for himself, it is to be done for him; he must perform an allotted task for an allotted reward, whether he is willing or not. Socialism proposes to establish equality among unequal men by reducing them to the dead level of slavery. Society is to be reconstructed; personal liberty abolished; all land and capital put in the hands of the managers of the scheme, who will determine what things are "socially necessary," and by their subalterns compel everybody to perform the task assigned to him. The confiscation of all private property is the attractive bait held out by those who in the grand social upheaval expect to be on top. Robespierre, Marat, and the Jacobin Club professed to be great philanthropists. The central aim of socialism is said to be justice. Ignoring the difference which exists among men, sacrifice is to be measured by a unit of labor time, for which everyone is to receive the same wages. But if an hour's labor in one occupation ought to count for more than in another, the managers of the scheme will measure the difference, and not

every person for himself. The things deemed "socially necessary" having been determined by them, the laborers must do the work whether they are willing or not, for otherwise society would suffer. In a state of freedom, self interest is the goad, and every person can prick himself much or little; in a state of slavery, the master and overseer apply the goad. Another method of accomplishing justice is to compel the production of those things deemed "socially necessary," and to divide the net proceeds among consumers in proportion to their reasonable needs, or in proportion to consumptive instead of productive power, the managers of the scheme, however, to determine what are reasonable needs. By some people freedom is highly esteemed; but the Israelites, although fed from heaven, wept when they remembered the fish, cucumbers, melons, leeks, onions, and garlic on which they were fed by their masters in Egypt.

If society is to be regimented, and everybody compelled to work under overseers, it would seem to be good economy to vest the management of the scheme in the priesthood; for then every person's eternal and temporal welfare would be secured by the same piece of machinery. Then everyone might find a subsistence somewhere about the soup kitchen of the national workhouse and at the same time feel assured of being at least a small angel in the world to come.

Although it may be true, since the Pope says

so in his letter, that in a state of innocence everybody would practice industry as their free choice and delight, yet in the present state of depravity labor among the thorns and thistles is unequally arduous. When labor became a cause of sorrow it fell heaviest on ignorance and stupidity. Those who could do mental labor soon employed beasts to perform physical toil, and thereafter harnessed the forces of inanimate nature. These are now doing labor more and more; mental labor causes the senseless machine to become automatic. The chief source of wealth is mental, not manual labor. A social organism would be a strange sort of an octopus, all legs and arms, and no head.

III.

RELATIVE VALUE.

The essence of value being satisfaction, the use values of different things are of the same nature, and may be compared with each other as to quantity. Such comparison brings into view their relative use value. Commodities of a uniform grade or quality are usually measured as to their quantity by units of number, length, area, bulk, weight, etc. If at any time and place a certain number of units of one commodity had an equal value to a person with a certain other number of units of some other commodity the ratio of the relative value of the two quantities to him

at such time and place would be unity; if he considered the two quantities to be of equal value to him, no reason would exist why he would prefer the one to other.

Relative value is variable. The use value of every commodity per unit of quantity being variable, their relative value is also variable, varying from time to time and from place to place.

To the same person; for if he had more food than he could consume and no clothes, their relative value to him would be different from what it would be if he had a superfluity of clothes and no food.

As between different persons; for if one were hungry and the other thirsty, the relative value of food and drink would not be the same to each of them; at some other time their condition as to the two things might be reversed.

IV.

EXCHANGE VALUE.

When different things are exchanged between their respective owners such things are said to have exchange value.

The existence of this quality depends upon a difference in the relative value of the things exchanged to the respective parties and their right to make the transfer. Every person estimates for himself the relative pressure of his

wants and the relative value to him of the means necessary for their satisfaction. Market value is the combined result of the individual opinions of the buyers and sellers.

In every exchange each party gives what he considers to be the comparatively superfluous for the comparatively necessary, and expects to gain in value to him by the exchange; for otherwise he would act without a motive. If a person has more of anything than he requires for his own use, and is in want of something else, some of the former may well be of less value to him than some of the latter. By an exchange the owner of a thing, although it may be a useless superfluity to him, can make it worth to him as much as what he can obtain in exchange for it; how much this will be depends on his trading capacity and value sense. Fraud, deceit, a lack or mistake of judgment may cause a loss where a gain was expected. A person may pay too much for his whistle, too much for green spectacles, or even sell his birthright for a mess of pottage. But everyone who is at all competent to take care of himself usually gains more or less by an exchange. If he thinks a surplus in bushels of grain are of less value to him than n yards of cloth, he is usually correct in his opinion.

Neither party is satisfied with a mere balance of relative value to him, but strives to give the least and get the most possible. Hence, an exchange is usually preceded by a negotiation,

during which each party has the benefit of the other's opinion as to the quality of the articles and their value; when each party believes that he has reached the best terms he can make for himself, and that he can do no better by dealing with some other person, a bargain is struck upon a basis finally agreed upon. It is naught, it is naught, saith the buyer; but when he is gone his way then he boasteth.

Ratio of exchange is the basis upon which an exchange is made; as if m units of one commodity are exchanged for n units of another, their ratio of exchange in that transaction is $\frac{n}{m}$ or $\frac{m}{n}$; or, a unit of the former buys $\frac{n}{m}$ units of the latter, and a unit of the latter buys $\frac{m}{n}$ units of the former. Such is the *degree of exchange value*, or relative purchasing power of each of the commodities in the case supposed. In other exchanges of the same commodities between other persons, or between the same persons at another time or place, their ratio of exchange in large or small quantities would probably be $\frac{n+p}{m+p}$. Even if the same commodities of any certain grade or quality always exchanged, at wholesale or retail, at a certain ratio, e. g. $\frac{n}{m}$, the exchanges would not be made on the basis of equivalents. If neither party gained anything, both parties would act without a motive. But the fact is, ratio of exchange varies with the parties concerned, and from time to time and from place to place.

If an exchange were made between A, the owner of a horse, and B, the owner of sheep, on the basis of the horse for twenty sheep, such basis would not fix a ratio of exchange between all horses and sheep as to other persons, nor as to A and B even as to the same horse and sheep at some other time and place ; for then A might need or want the horse more than the sheep, and B the sheep more than the horse. At one time, according to Shakespeare, King Richard was in great need of a horse.

At an exchange as above supposed, the bystanders would probably differ in their opinions as to the relative value of the animals ; one might say that eighteen of the sheep were worth as much as the horse, and another that the horse was worth two dozen of such sheep. The transaction, however, would prove that A then considered the twenty sheep to be of greater value to him at that time than the horse ; and that B considered the horse to be of greater value to him at that time than the sheep ; both of them might be correct in their opinions. If A would have preferred nineteen of the sheep to the horse, and B the horse to twenty-one sheep, each of them would consider that he had gained by the transaction.

Title is the other element which is essential to the existence of exchange value. An exchange between two persons, neither of whom had any right to the respective articles proposed to be

exchanged, nor power to confer any, can not be made, unless possibly between two thieves, who might thereby transfer to each other their respective possessory rights. Therefore, if a thing is not property, it can not have exchange value; and any such value which might be imputed to it would be merely potential or imaginary; and any reasoning about such value would be mere idle speculation.

But if a thing has an owner, and it is not obtained from him by robbery, theft, or as a gift, it becomes necessary, in order to induce him to part with it, to offer him something which he will consider to be more valuable to him in exchange for it. Its acquisition by this method would be impossible to a person who possessed nothing which the owner of the coveted object would accept in lieu of it. A demand for anything belonging to another, in order to be effectual, must be backed up by a supply of something which such other person wants more than the thing demanded.

Property is defined to be: That which belongs exclusively to a person, that to which he has a legal right, a thing owned; also, as the exclusive right of possessing, enjoying, and disposing of a thing; ownership. The essence of property consists of rights, although the word is applied both to the thing and to the right to it. Value is impaired or fades away if a person is not secured and protected in his personal and property rights.

In fact, rights are essential to value; for a thing can not have an actual use value to a person unless he has a right or power to appropriate it in satisfaction of his wants. Food can not satisfy hunger unless there is a right or power to eat it; nor clothing satisfy the need for it unless there is a right to wear it. An actual supply implies the right or power to make the demand effectual.

An owner has the exclusive right to possess, enjoy, and dispose of an object of desire to the extent of his right to it. If all such objects belonged to nobody, none of them would have any exchange value, nor any actual use value until they were appropriated by some one. A science of wealth requires some assumed basis of personal and property rights. Any system of socialism, communism, or anarchism must have as its basis a system of personal and property rights to correspond therewith. What a man shall have a right to do; what shall be his acquisitions, if any; and to what extent he shall be protected in his life, liberty, and property, are matters of essential importance in any inquiry into the nature and causes of wealth. The word wealth is often used as synonymous with possessions and property. A thing, however, may be property and not wealth; for if a thing has lost its value by use and wear, or decay, it would continue to be property until its owner saw fit to abandon it.

The fact that ownership is essential to the existence of exchange value affords an explana-

tion of what has been called a paradox. Adam Smith said: "The things which have the greatest value in use have frequently little or no value in exchange; and, on the contrary, those which have the greatest value in exchange have little or no value in use. Nothing is more useful than water; but it will purchase scarce anything; scarce anything can be had in exchange for it. A diamond, on the contrary, has scarce any value in use; but a very great quantity of other goods may frequently be had in exchange for it."

Water running loose and open to everybody can not have any exchange value, nor any use value, until it is appropriated by some one. When water is property, as a flow available for irrigation, a water power, or a city supply, it has exchange value just the same as other property, the degree of its exchange value being dependent upon the amount of its supply relative to the demand for it. In Chicago, with a vast body of fresh water in front of it, spring water from Wisconsin is sold like other goods, it being asserted and believed by some that the Wisconsin water is purer than the lake water. Various kinds of water in barrels and bottles are sold everywhere. Water, in the form of ice, is regularly sold at wholesale and retail. Ice formed on the surface of a pond or a running stream is often sold by the owner of the soil like any other crop. The wicked men drowned in the deluge, and who went to a place of torment, had reason to say nothing is more

injurious than water, except fire. If diamonds and water are property, their relative value, per units of quantity, depends upon the same considerations as those which apply to any other kinds of property.

Measure of Wealth. Everyone estimates his property by its value to him; i. e., by the benefit and satisfaction which he can derive from it, or obtain by means of it. If he uses or consumes a thing himself, its benefit is direct; if he exchanges it for something else, its benefit is indirect. The value of any superfluity which he may possess, or of anything having a less value to him than other things which he may need or desire, by means of an exchange is made equal to the value to him of those things which he obtains in lieu of it, less the cost of making the exchange. Commodities are produced partly, and often entirely, for the purpose of sale, it being only a part of those things which one needs or desires that he can, or at least does, produce himself. Therefore, where markets exist and sales are constantly made, it is usual for everyone to measure his wealth by its purchasing power, such being the best practical approximation to a correct measure of its use value.

But it has been said that wealth is properly measured by quantity of commodity, and not by its exchange value; that, "a man is rich or poor according to the abundance of necessities and luxuries which he can command, and whether the exchange value of these for money, corn, or labor

be high or low, they will equally contribute to the enjoyment of their possessor." As to this it may be said that if a man had at all times a crisp and fresh stock of the best quality of everything in quantity sufficient to fully satisfy all his wants, it would be immaterial to him whether his riches had any exchange value at all or not. But not having an abundance of that kind, he would be rich or poor according to the abundance of necessities and luxuries which he could command, and the quantity of them which he could command would depend upon the purchasing power of his riches. If he possessed at any time an abundance of necessities and luxuries, such of them as he could not use or consume before they spoiled or decayed would have no value whatever to him except to the extent of their purchasing power.

If wealth were measured solely by quantity of commodity, and not at all by its exchange value, every such quantity would measure the same when and where it was a superfluity as when and where it was scarce and in demand. A superabundance would be proportionately greater wealth than any less amount. Every product would measure as much wealth in the hands of its producer as in those of the consumer. Wheat in Dakota, beef and pork in Kansas, cotton in Alabama, cloth in New England, would measure as much wealth there as elsewhere. Wealth would not be increased by transporting goods from where they are not wanted to where they are wanted.

V.

MARKET VALUE.

Since goods are usually bought and sold, their ratio of exchange, or, as it is sometimes called, their relative value, at any time and place, is ascertainable only as a deduction from the prices at which they are bought and sold at such time and place, such prices being one amount at wholesale and another at retail.

The makers of goods, or their first owners, do not usually deal directly with each other, but sell their surplus products to dealers in them, and buy from time to time what they want from the retailer. A tailor, shoemaker, or other person may do custom work or directly supply a local or limited demand. But those commodities which enter into general consumption, and which are continuously produced for sale, are usually supplied to consumers after they have passed through the hands of one or more dealers in them. A dealer in a commodity produces it at the time and place where it is wanted, and wanted the most, or assists in the process. If American farmers are ready to sell one or two millions of bushels of grain per day, over eight millions of bales of cotton within one hundred days, as in 1894, millions of live-stock, vast amounts of tobacco, wool, and other products,

there must be buyers of the stuff to hold, transport, and sell it to consumers at home and abroad. The world's supply of commodities is taken off the hands of its producers by the traders and finally handed over to the consumer from time to time as he may want it, and in quantity proportioned to his effectual demand.

The consumer gains by buying whatever he requires when he wants it from those who make it their business to supply the consumptive demand. He lays in no large stock of anything; most commodities are bulky, expensive to keep, and more or less perishable; e. g., the daily newspaper soon loses its value. A producer of anything intended to meet a general demand, as cloth or hardware, can not afford to retail his product to consumers far or near; to do so would interfere with his business, involve cost, and loss from remnants, rejected and deteriorated goods. Their wants are so varied and capricious that the experienced dealer can hardly satisfy them. He deals with as large a number of customers as possible, sets a high price, at retail often double the wholesale price, on the newest, best, and most desirable things, and as his stock grows old, deteriorates or fails to be in demand, he finally endeavors to dispose of it at or below cost to those who are anxious for bargains. The customer who wants the best, e. g., eggs new laid, fresh butter, fish just caught, the choice qualities and cuts of meat, selected fruit, the best quality

and newest style of goods, must pay a price to correspond. Any one who is willing to eat stale fish, fruit, vegetables, inferior qualities of meat, the tough pieces and shanks of a carcass, use old stock and poor qualities of anything, needs no public warehouse provided by socialism to supply him, for the retailer is always anxious to sell his old, decayed, and rejected goods at less than cost. What a consumer wants is satisfaction, of which he elects to be the judge at the price asked for it, and the dealer endeavors to gratify him. A woman wants what is in fashion, and what will suit her in style, make, color, and price. A man also wants what will suit him, e. g., his tobacco must be of the right sort. Some one might say that tobacco-smoke drawn through a cob pipe ought to answer the same purpose as if it were drawn through a meerschaum or a Havana cigar; but tobacco, like other things, varies in quality, and tastes differ. Prison fare, a striped suit of warm clothing, and eight hours of labor or less per day may suffice to sustain life and health. But happiness resides outside of prison walls and any straight jacket invented by some schemer to promote the general felicity. In a state of slavery or coercion a consumer must take whatever his masters and overseers see fit to give him; in a state of freedom the supply must conform to the demand. Producers and dealers endeavor to supply consumers with what they want when it is wanted, and free competi-

tion reduces the reward for doing so to a minimum. It is not sufficient for producers to go on mechanically "embodying (so-called) utilities in material objects"; for if anything is produced which is not wanted, or in excess of the demand for it, there is no way at present to compel people to consume it at or below its cost.

A market is a place where commodities (one or more) are continuously, or at stated times, offered for sale and sold. Those who buy and sell at any place constitute the market there. A city or other locality is a sufficient designation of the place to which a market price refers; e. g., the prices of various commodities at London, Liverpool, Havre, Hamburg, New York, etc., are published daily in the newspapers, and otherwise.

If those who deal in one or more things assemble together at one spot, as on some board of trade or stock exchange, and there publicly buy and sell, any one present and conversant with the mode of doing business there can reasonably ascertain the prices at which articles are sold there; in other cases market prices are ascertained by inquiry of buyers and sellers, or from the reports of sales published daily or oftener, and which are more or less correct, depending upon the ability and honesty of the reporter. There is no such a thing as a perfect market, where every commodity is durable, uniform in quality, and brings the same price at the same time. The relative value of gold and silver continually varies,

their relative value everywhere being fixed daily by the London quotations, which are said to be made up in the afternoon as an average of the dealings for that day among the bullion dealers. If a thing is sold at auction, and for any cause is again put up and resold, it rarely brings the same price; or if a similar thing is offered, it will probably sell for less or more than its duplicate.

The price of a commodity varies with its quality; if the grade is not uniform and the article durable, it is usually inspected by the buyer, or is bought by sample, it being agreed that the quantity bought shall conform to the sample. A person must be familiar with the various kinds and grades of a commodity and with the mode of dealing in it, in order to act intelligently concerning it, or even to understand the quotations of its market price.

As specimens of grades and quotations of market price are the following: In the Chicago live-stock market there are numerous grades of cattle, the poorest selling for about one-third of the best, the price of each grade varying with the average merits of the particular lot of cattle sold. In wool, of the sort called "pulled," there are about fifty grades, the poorest bringing about one-fifth of the best. In the New York and New Orleans markets there are twenty-two grades of cotton. Coffee may be, or claimed to be, Mocha, Java, Rio, Santos, etc., with various grades of each. At London, October 7, 1891, Rio was quiet at $12\frac{3}{4}$ c.

for No. 7, the reported visible supply of coffee in Europe and America on October 1, 1891, including the amount afloat from Brazil, Java, and the East, being 2,576,456 bags, as against 2,214,544 bags "in sight" on October 1, 1890.

At New York, March 26, 1895, sugars were quoted: Raws, quiet but firm; Cuba, Muscovado, 89 test, $2\frac{1}{6}$ c.; molasses sugars, 89 test, $2\frac{7}{16}$ c.; centrifugals, 96 test, 3c.; refined, quiet but firm on the basis of $3\frac{5}{16}$ @ $4\frac{1}{2}$ c. for granulated: at Liverpool same date, American wheat, No. 2 red winter, 4s. 8d.; No. 2 spring, 5s. $2\frac{1}{2}$ d.; No. 1 California, 5s., with a difference between "spot" and "futures"; beef, extra India mess, 70s.; prime mess, 60s.; pork, prime mess, 57s. 6d.; medium, 52s. 6d.; butter, finest United States, 55s.; good, 50s.

At London, during the season of 1889-90, the bank rate for money varied between the extreme limits of 3 and 6 per cent; English wheat (farmers' deliveries), between 29s. 1d. and 36s. 6d. per quarter; cotton (mid. Or.), between $5\frac{9}{16}$ @ $6\frac{11}{16}$ d. per lb. During the season of 1890-91 the bank rate varied between $2\frac{1}{2}$ @6 per cent; wheat (farmers' deliveries), between 31s. and 41s. 4d.; cotton (mid. Or.), between $4\frac{7}{16}$ and $5\frac{3}{16}$ d. Cargoes "off the coast" of California wheat, between 38s. 6d. and 47s.; ditto "shipping and shipped," between 37s. and 46s. 6d.; Calcutta No. 2 club, between 34s. and 41s. 9d. At Liverpool, during 1891, bacon (long, short, and clear) varied between the extreme limits of 25s. 6d. and 45s. per 112 lbs.;

Cumberland cut, between 24s. 6d. and 53s.; cured salt hams, between 35s. and 56s.; lard, per 100 lbs., between 29s. 6d. and 36s. 6d. At Chicago No. 2 spring wheat varied, during 1888, between the extreme limits of \$1.16 $\frac{3}{4}$ and 72 $\frac{1}{4}$ c. per bushel; during 1889, between \$1.07 and 75 $\frac{1}{2}$ c.; during 1890, between \$1.10 and 70c. Early in the summer of 1891, on report of short crops abroad, the price of No. 2 spring wheat at Chicago was advanced from about 85c. to about \$1.16 per bushel. But soon after harvest the farmers sold wheat at the rate of one and one-half millions of bushels per day, and later at the rate of about two millions of bushels per day, whereupon the price sagged down to about 95c. in October and 80c. in April, 1892; the price of wheat abroad failed to respond to the higher prices. In 1888, owing to a short crop of wheat in this country, the price of No. 2 red winter at New York was advanced from about 84c. to \$1.01 per bushel, but there were good crops elsewhere, and prices abroad failed to respond. The wheat crop of 1894 in this country was much below an average, but for want of a foreign demand the price of No. 2 spring at Chicago went below 50c. per bushel. The world's harvest of wheat is perpetual, being always at hand somewhere in the Northern or Southern Hemisphere, the annual crop within the reach of statistics being estimated at about twenty-five hundred millions of bushels, as an average, but its price varies as above. On September 25, 1891, at Chicago (weather unsea-

sonably hot), the market report was: "Nearly 20,000 fresh and 12,000 stale cattle proved too much for yesterday's market, which was flat. The number was entirely too great, considering the glutted condition of the meat channels. There were cattle here for which owners refused \$4 (per 100 lbs.) a week ago, which could not be sold for over \$3."

The price of a commodity varies not only with its grade or quality and as between different buyers and sellers scattered about a market—a sharp seller selling for more and a sharp buyer buying for less than others—but also when the supply is in excess of the demand, or the contrary. If the quantity offered for sale at any price exceeds the demand for it at such price, the excess of supply must remain unsold unless it is crowded upon the market; e. g., a perishable article, as fruit; whereupon competition among sellers reduces the price. Or, if the quantity demanded at any price exceeds the quantity offered at that price, a part of the demand must remain unsatisfied, else competition among buyers raises the price, a rise in price tending to increase the supply and to stint the demand, and a fall in price tending to increase the demand and to stint the supply.

There is a present and also a prospective supply. There is an amount in the market or on its way there, i. e., "in sight," and there is another and more uncertain amount still in producers'

hands, or available in the future. More or less of a present supply may be withheld by its owners, depending upon their several views as to its present as compared with its future or market value. So, also, the demand varies according to the several views of buyers as to the present as compared with the future price of a commodity. Commodities are not hurried forward as fast as they are produced and crowded on the market, unless they are perishable or their market price is very attractive; nor do buyers rush in greedily unless their wants are very pressing or the price is abnormally low. Every producer or owner of a commodity consults his own interest and convenience as to when and where he will dispose of it, and every buyer acts in like manner on his own behalf. Every seller endeavors to sell at the highest price, and every buyer to buy at the lowest. The greater part of a year's surplus product is usually marketed during the year. A great variety of causes affect market price—the durability of an article, the cost of its keep, the amount "in sight," the amount not in sight but available in the future, corners, strikes, war, a tight or easy money market, changes in taxes, tariffs, etc.

The variation of market price is a source of profit and loss. Any one who can foretell the price of stocks, grain, cotton, etc., has no need of the ring and lamp of Aladdin. Every buyer or seller who waits is a speculator, and there are also dealers who seek their fortunes in a practical

study of what is called the law of supply and demand, but who, in spite of all the light which has been shed upon that subject, continually differ in their opinions. The "bull" thinks the price of an article is too low, and is a buyer. The honest farmer or other producer wants the market well stocked with bulls. The "bear" has a contrary opinion and is a seller. Consumers regard bears with favor. The bulls and bears buy and sell for cash and also for future delivery. Sometimes one side corners the other, but such events are usually local and short-lived. Their operations give precision and publicity to market price. By their assistance everyone can reasonably ascertain from the market reports published daily or oftener the current price of any staple commodity for present or future delivery, and can sell or buy "spot" or "futures" at or about the price then current. Formerly the farmer wagoned his grain to Chicago, finding on arrival the price quite indefinite, buyers indifferent, and liable finally to be compelled to exchange his product for groceries or store goods on some basis fixed by the other party, who might perhaps sweeten the barter by paying some small sum in cash. Now a producer or owner can sell grain ahead by the thousand or hundred thousand bushels and deliver it afterward for cash on delivery.

The price of anything is no exact sum in a market unless fixed by law, or the article is a monopoly so that its price can be fixed by the

seller, or is sold at auction, in which case each parcel sold has a price of its own. The one-price store always has a bargain counter, and the one price is not immutable. As above cited, on March 5, 1895, at New York, "refined sugar was quiet but firm on the basis of $3\frac{1}{4}$ c. to $4\frac{1}{2}$ c. for granulated." The difference between these two prices on 100 tons would be \$1,125. Tables of market prices which purport to give the prices per day, month, or year, of commodities, more or less variable in quality, are evidently made up on some system of averages. But in the market nobody buys or sells at any average price. Where transactions are large there is a material gain or loss at some of the prices from which the average is made up. A miller who makes 10,000 barrels of flour per day, may buy 1,000,000 bushels of wheat at one time; the difference of a cent a bushel makes a difference of \$10,000 in the price paid. A cent a bushel makes a difference in the price of an average crop of wheat in this country of about \$5,000,000. Its price often varies from 1 to 5 cents a bushel in a day, and during a year may vary 30 or 40 cents a bushel as between the highest and lowest price.

Cost and Market Value. Since the price of a commodity varies with the supply relative to the demand for it, and the cost of its production affects the former and the cost of its acquisition the latter, these two causes constantly tend to keep its price within certain extreme limits.

There is a minimum below which the market price of anything can not continue without finally cutting off its supply. Those who produce it at a loss must quit when they have exhausted their capital and credit, and those who can do better at something else will quit voluntarily, for in such case the market price of the article is below its cost of production to each of them. But before its production finally ceases, unless the article is superseded by something better or more desirable, goes out of fashion, or for some cause is not wanted, its supply finally becomes inadequate to the demand, and its price rises. As its price rises the reward for its production increases, which stimulates its producers to increased activity, and induces others who can do so to aid in increasing its supply, unless there is a general rise in prices consequent upon an inflation of the currency, or other cause. But there is also a limit to the price of any product as compared with other things; for as its price increases, its consumption cost also increases, which stints the demand more and more until such demand must finally become nominal. But before reaching that point the supply becomes in excess of the demand for it, and its price declines until finally the supply again becomes inadequate from a decrease in its amount and an increase in the demand for it.

An effectual demand consists of a want coupled with a disposition and ability to gratify it. There is a limit to the quantity wanted of anything,

although it can be had for nothing. A person drinks water until his thirst is quenched and then stops; he wants no deluge for any purpose. If a thing must be bought, the cost of its acquisition narrows up the extent of the demand for it. Such cost to everyone is the production cost to him of what he gives in exchange for the thing bought. No one can continue to buy more than his revenue will purchase, and however he may distribute it in gratifying his various wants, there is a limit to his effectual demand for every commodity, the aggregate of which several demands constitute the total demand for it. As the price of anything rises, the ordinary consumer uses the article less freely; he economizes, or buys other relatively less costly and more desirable things. If pressed he will use inferior qualities of the same commodity; one kind of food, drink, or clothing instead of another. During the Irish famine, Indian corn was used as a substitute for potatoes; other textiles were used abroad in lieu of cotton during the late Civil War. Great loss was suffered at Chicago in a corner on pork because the consumptive demand refused to respond to the high price set on the article by those who engrossed the whole supply until it became too heavy for them to carry. Such also was the result of an attempt made a few years ago to engross the entire world's supply of copper. Commodities are produced in such variety that no one is ordinarily compelled to buy any one of them. There is other meat besides pork, and

other metals besides copper. A person can wear woolen, linen, or cotton goods; drink beer instead of whisky; tea, cocoa, or chicory instead of coffee; eat Indian corn, rye, oats, etc., instead of wheat, and wheat instead of corn or potatoes when bakers' flour is \$2 and patent flour \$3.20 per barrel, wheat (No. 2 spring) 54 cents, corn 57 cents, and potatoes 70 cents per bushel, as they were at Chicago in September, 1894.

While the extent of the demand for a thing is affected by its cost to the consumer, and also by the cost of its substitutes, yet the demand for it is greatly aided by an established taste for it. Many will continue to consume corn or potatoes, although wheat is cheaper. A preference abroad for other grain, in fact less nutritious, materially limits the foreign demand for Indian corn. When the tax on distilled spirits raised the price of whisky from 15 cents a gallon to \$1.15 or more, the quantity wanted was not reduced proportionally; so also as to beer and tobacco. On the other hand the stress of a want, as compared with other wants, varies from a desire for variety, or a change of fashion, custom, and habits. Boots and stovepipe hats are little worn; snuff has almost gone out of use; broad-toed shoes are not wanted.

Free competition in the production and sale of commodities is the only method of fixing their price in which all parties can concur. Either the producer or consumer will object to any price

fixed by law, and to all combinations entered into in order to raise or lower the price of anything or to monopolize its production. It is proper by law to punish and prevent the sale of unwholesome commodities, adulteration, fraud, deceit, and all boycotts and other combinations to oppress anyone in the exercise of his just and lawful rights, leaving him free to decide what, if anything, he will produce for sale, when, where, and at what price he will sell his product — those covered by patent, copyright, trade-mark, or other legitimate monopoly excepted — and also free to buy anything which may be lawfully offered for sale, when, where, and at any price which he may see fit to give for it. Every person engaged in an occupation might desire to have his product or business a monopoly, but if the price of everything could be doubled their relative value would remain the same. Therefore, every trade union, trust, pool, syndicate, etc., ought to insist that in every business, except their own, there should be no monopoly whatever.

Under ancient class legislation a baker in London was convicted by a jury of consumers and pilloried because he bought two quarters (16 bu.) of wheat, then exposed for sale in the common market on the pavement within Newgate, at $15\frac{1}{2}$ d. per bushel, being $2\frac{1}{2}$ d. over the common selling price at that time in that market, "to the great loss and deceit of the common people and to the increase of the dearness of corn." Now the wheat

might have been of superior quality, or of a dry sort which would absorb more water in the dough, or take less alum in order to make the regulation loaf. Formerly famines were frequent in England, there being fifty-seven in that country during the eleventh century, according to Mulhall.

It being reported, during the winter of 1894-5, that two pounds of bread were sold in New York for 5 cents, it was proposed to compel the Chicago bakers to do the same. The city having no authority to fix prices, some Solon introduced a bill in the Legislature for the desired purpose. At that time everyone could, if he chose to do so, bake his own bread, and perhaps also bake bread for sale, and sell two pounds or more for 5 cents, unless he feared injury as a "scab" from some bakers' union.

In 1670 a bill was passed by one branch of the General Court of Massachusetts, but not concurred in by the other, reciting: "This court considering the great difficulty and discouragement that at present lies pressing upon many inhabitants of this jurisdiction, especially upon such whose callings are in husbandry, not only by reason of the afflicting hand of God upon them several years in blasting their principal grain, and abating their increase in other corn, and slowness of market, and exceeding low price for what the husbandman can raise — unto whose afflicting hand all ought to submit and humble themselves, and yet with the prophet confess, 'Thou, Lord,

hath afflicted us less than we deserve,'—but also difficulty and discouragement are yet heaped and increasing upon them and others by reason of the excessive dearness of labor by artificers, laborers, and servants, contrary to reason and equity, to the great prejudice of many householders and their families, and tending to their utter ruin and undoing—and the produce thereof is by many spent to maintain such bravery in apparel which is altogether unbecoming their place and rank, and in idleness of life, and a great part spent viciously in taverns and alehouses, and other sinful practices, much to the dishonor of God, scandal of religion, and great offense and grief to sober and godly people amongst us, all of which timely to prevent, etc.," thereupon proceeding to fix wages, payable in corn at the price from year to year set by the General Court, and providing penalties for the breach of its provisions. The modern Pecksniff entertains quite opposite views, and favors an "afflicting hand" manifested in the form of boycott, intimidation, force, and violence done to scabs, employers, and their property.

Every person, who is free to do so, in order to obtain a livelihood or a profit, selects from those occupations which are open to his choice, the one which appears to him to offer the best reward for the same cost to him. All employments are kept filled by each one of the rising generation and others in search of a livelihood or profit, amount-

ing in this country to a million or more annually, exercising his power of choice, and adopting, with or without the assistance of friends, the occupation which appears to be best suited to his means, capacity, inclination, and previous training. What reward will be deemed adequate in any occupation which is or seems to be arduous, hazardous, unwholesome, discreditable, dirty, or otherwise unattractive, or the contrary, every person decides for himself. Cost and its reward no one can measure and compare except the person who undergoes the one and enjoys the other. For example, no one can estimate the sacrifice made by a smith in shoeing a horse except himself. It probably costs one smith more than another to shoe the same horse equally well, and the price paid for the job may afford him less satisfaction. But if both smiths continued to shoe horses, the fair inference would be that each of them considered his reward to be worth its cost to him, and to be at least equal to any reward which he could otherwise obtain at the same cost to him. Some fail to find any industrial pursuit which offers to them a sufficiently attractive reward. Darwin, during his voyage round the world, asked two beggars in Chili why they did not work? One gravely answered that the days were too long, and the other said he was too poor.

Among the great variety of employments there are places suited to every degree of capacity; and everyone is rewarded according to

his ability and good fortune. Every common sailor is not competent to command the ship, nor every common soldier to command the army, nor every railroad employe to be its manager, nor every wage laborer to take the place of his employer. With equal opportunities unequal men achieve unequal success. Some fail from ill health or other misfortune, but more fail from incapacity, ignorance, indolence, extravagance, drunkenness, dishonesty, and bad habits. In the same employment one person is much sought after by customers, employers, and clients, while another gains only a meager subsistence or fails entirely. The diligent, skillful, able, and honest man is always busy, while others are out of a job and apply for work to him, for which they demand high wages, whether they are indolent, unskillful, dishonest, drunk, or sober. In one case a journeyman tailor employed to make up a coat, in order to finish his job easier and sooner, cut off part of the pattern and spoilt the coat. Such a tailor fails even as a journeyman. Employers are not an hereditary race; the most successful men usually start poor and rise to position and affluence by their own merits and against all obstacles. The rich Carnegie says his father was a poor Scotch weaver, and his wealth was not due solely either to good luck or oatmeal. The master workman of the Knights of Labor was paid \$5,000 per annum for his services, while the Sir Knights, who voluntarily footed

all the bills, received for their labor \$2, more or less, per day.

The office of President was held successively by a rail-splitter and a tailor, while the Union hosts were led to victory by the son of a tanner. Others led their armies to defeat.

Under free competition every competitor endeavors to adopt the occupation, lying within his power of choice, which will afford him, on a reasonable average and according to his standards and opinion in the matter, the best reward at the same cost to him. And supposing every competitor to have accomplished his purpose, then no one would have any motive to change his occupation, and the relative value of commodities would be in equilibrium. But even if nobody died and there was no rising generation or other newcomers, yet if the production or consumption of commodities varied relatively, the equilibrium would be at an end; the supply of some things would be in excess and of others deficient, and a redistribution of industry would be required. But one generation is continually dying out and another succeeding having different capacities, tastes, and desires, too many of whom adopt some pursuits and too few others, while many of those who have already made their choice fail of success in it or become dissatisfied with their lot and endeavor to better themselves by a change. Very few people consider themselves adequately rewarded for their merits and sacrifices. Also

new industries arise—e. g., electric appliances—new wants and new means to satisfy them; new uses are found for things, e. g., cotton seed, rock oil, coal tar, gas, animal fat, etc.; and new modes of conducting old industries by improved methods and machinery.

VI.

NATURAL VALUE.

Free competition implies the right of every competitor to estimate and compare cost and its reward for himself; and, therefore, if everyone of them were, in his opinion, as well rewarded in his occupation as he would be in any other within his power of choice, competition would have spent its force, and the relative value of commodities would be in equilibrium, although the cost of each of them to each of its producers was not the same.

But the relative value of commodities has been called natural, or normal, when they exchange for each other on the basis of equivalents in cost, i. e., when the cost of their acquisition is equal to the cost of their production. In order to present natural value in a definite form, suppose—

c=a unit of cost.

x.c=cost per unit of commodity "a,"

v.c = " " " " " " "b,"

and that m units of "a" cost each of its producers the same to produce them as n units of "b" cost

each of its producers, then, at their so-called natural or normal value,

$$m \cdot x \cdot c = n \cdot y \cdot c, \text{ or } \frac{n}{m} = \frac{x}{y}, \quad (1)$$

it being asserted that under free competition $\frac{x}{y}$ regulates and determines $\frac{n}{m}$; it being also assumed, contrary to the facts, that every commodity is uniform in quality, and that all men are exactly alike.

If m units of "a" and n units of "b" have the same market value, what is c or a unit of cost whereby it may be known whether or not their cost is the same? According to great authority, a unit of cost consists of "a quantity of labor," it being said (Ricardo, Chap. 1, Sec. 1) "that this is really the foundation of the exchangeable value of all things excepting those which can not be increased by human industry is a doctrine of the utmost importance in political economy." The doctrine of natural value being of that importance, whatever c may represent, in Eq. (1), the subject deserves careful examination, beginning with Adam Smith.

I. THE DEER AND BEAVER CASE.

Adam Smith said (B. 1, Chap. 6): "In that early and rude state of society, which precedes the accumulation of stock and the appropriation of land, the quantities of labor necessary for acquiring different objects seems to be the only circumstance which can afford any rule for exchanging

them for one another. If among a nation of hunters, for example, it usually cost twice the labor to kill a beaver which it cost to kill a deer, one beaver would naturally exchange for or be worth two deer. It is natural that what is the produce of two days' or two hours' labor should be worth double of what is usually the produce of one day's or one hour's labor."

Here cost consists of labor, and is measured by a unit of labor time, viz., a day's or an hour's labor, which is supposed to be the same sacrifice to every hunter, and to procure the same amount of deer or beaver, whether one hunter undergoes the labor or another.

But if it cost a hunter twice the labor to kill a beaver as it cost him to kill a deer, what motive would induce him to kill deer for the purpose of exchanging them for beaver? He would not undergo the cost of killing two deer and the additional cost of making the exchange, and take the chances of doing so, when he could kill a beaver at the same cost as to kill two deer. No person, savage or civilized, will produce, or continue to produce, anything for sale or exchange unless he can save in cost by the exchange. Adam Smith says (B. 1, Chap. 2): "In a tribe of hunters or shepherds a particular person makes bows and arrows, for example, with more readiness and dexterity than any other. He frequently exchanges them for cattle or for venison with his companions, and finds at last that he can

in this manner get more cattle and venison than if he went to the field to catch them." To this it may be added that his companions gave cattle and venison for bows and arrows because they thereby obtained the latter at a less cost to them than if they made them for themselves. Everybody could not, nor can, make an arrow or spearhead out of a piece of brittle flint, nor other stone implements, many of which, and wampun, also, were made with such art that they excite wonder how the work was done with wooden or stone implements. It may be safely asserted, therefore, under color of great authority, that cattle and venison were exchanged for bows and arrows, and deer for beaver, because each party saved in cost to him by the exchange, to which may be added that he also gained in value; for if the bows and arrows were of greater value to their maker than the cattle or venison offered for them, he would refuse to make the exchange.

Suppose it cost A as much to produce a unit of commodity "c" as m units of commodity "d," and B as much as n units of commodity "d"; it is required to know the conditions on which each may save cost by an exchange.

If B gave A n units of "d" for $(1+x)$ units of "c," B would save the cost to him of producing the x units; and the $(1+x)$ units of "c" would cost A the same as $m(1+x)$ units of "d." Therefore each would save in cost as follows:

A, the cost to him of producing $n-m$ $(1+x)$ units of "d," or $\frac{n}{m} - (1+x)$ units of "c." }
 B, the cost to him of producing $n \cdot x$ units of "d" or x units of "c." }
 (2)

And the conditions are:

$$\begin{aligned} x &> 0 \\ \frac{n}{m} &> 1+x \end{aligned} \quad (3)$$

which hold good, positively, if $n > m$, or if the relative cost of producing "d" as compared with "c" is less to B than to A, although "c" costs A more to produce it per unit than it does B. For example, suppose $m=2 : n=4 : x=\frac{1}{2}$, then each party would save the cost to him of producing one-half a unit of "c."

Suppose there is competition in the production of the two commodities. If A gave B $(1+x)$ units of "c" for n units of "d," then one unit of "c" buys $\frac{n}{1+x}$ units of "d." But if E offered $(1+x+h)$ units of "c" for the n units of "d," B would deal with him unless A would do the same. If E, or some other competitor of A, made $1+x+h < \frac{n}{m}$ the exchange value of "c" would be below its cost of production to A, for he would save cost by producing "d." Suppose now that F, competing with B, offered $(n+k)$ units of "d" for $(1+x+h)$ units of "c," then B must do the same or be undersold. F might accept of a very small saving per unit of "d" in order to make a large saving by selling a large quantity of "d." Finally, if F, or some

other competitor of B, made k large enough, the result of the competition might be

$$\frac{n+k}{1+x+h} = \frac{n}{1+x}. \quad (4)$$

In which case both A and B would save as much by an exchange of their products as they did at first, which would justify the old saying that it is well for the cobbler to stick to his last.

If a person wants n, which exchanges in the market for m, and he produces m and exchanges it for n, it costs him the same as m, with the cost of making the exchange added. He may not be able to produce n at all, or only at great cost, while another or others can do so at a small cost to them. Every one usually acquires any home or foreign product by way of exchange at much less than it would cost him to produce it. If this were not so, there would be no motive to induce a person to procure m for the purpose of exchanging it for n, or of procuring n for the purpose of exchanging it for m.

Cost of Production, among a nation of hunters, would not be the only circumstance affecting the exchange value of their products. If it cost twice as much to kill a beaver as to kill a deer, the question would still remain, how much of each was wanted? If beaver were produced in excess of the demand, one of them would not exchange for two deer. This would reduce the supply of beaver. Hence, relative demand is a regulator of relative value.

Although it may be true that in the same occupation and to the same person, usually or on an average, two days' or two hours' labor would be double the cost or sacrifice of one, yet, since men are not exact duplicates of each other, labor in the same occupation for the same period of time will not usually, or on an average, amount to the same sacrifice, or produce the same amount in quantity or value. It is quite obvious that an alert, active hunter, swift of foot, with keen sight and hearing, would usually kill more deer or beaver in the same time than a dull, sluggish hunter, slow of foot, dim or short-sighted and hard of hearing; also, the former would probably enjoy the hunt and thereby lay down a less quantity of ease, liberty, and happiness than the other.

Also, men being unlike, some of the hunters would prefer to kill or trap beaver than to scour the country after deer. Whereupon, if one hunter could kill $(2+p)$ deer at the same cost to him as to kill one beaver, and another hunter could capture $(1+q)$ beaver at the same cost to him as to kill two deer, each of them would save cost by an exchange of two deer for one beaver. At that ratio of exchange, every hunter who could, or thought he could, kill two deer at less cost to him than one beaver, would kill deer, and every hunter who could, or thought he could, kill a beaver at less cost to him than to kill two deer, would kill beaver. In a state of freedom, every person will adopt the occupation lying within his power of

choice which will, in his opinion, afford him the best reward at the same cost to him, and will measure cost and its reward for himself. Therefore, if among a nation of hunters deer and beaver were killed for the purpose of exchange, their relative value would tend to become such that every hunter of deer would acquire beaver, and every hunter of beaver would acquire deer, at less cost to him by way of exchange than to procure them directly for himself; for otherwise, a hunter would alter his vocation, which he would have reason to do if too many hunted deer or beaver, or either of the animals became more or less difficult to capture, or varied in quality, or the relative demand for them varied.

The quantities p and q would be different to the hunters because of their inequality, natural and acquired. Whatever the ratio of exchange might be, the best or most efficient hunters would have more product to consume and exchange than their inferiors. No one of them would receive or be entitled to an average reward unless he were an average hunter; for, according to the author cited, in the original state of things existing before the advent of the landlord and capitalist, the whole produce of labor belongs to the laborer as the natural recompense or wages of his labor. But these natural wages, being contingent on the result of the labor, may be very small. For Adam Smith says: "Among the savage nations of hunters and fishers, every individual,

who is able to work, is more or less employed in useful labor, and endeavors to provide, as well as he can, the necessaries and conveniences of life for himself or for such of his family or tribe as are either too old or too young or too infirm to go a hunting or fishing. Such nations, however, are so miserably poor that, from mere want, they are frequently reduced, or at least think themselves reduced, to the necessity, sometimes, of directly destroying, and sometimes of abandoning, their infants, their old people, and those afflicted with lingering diseases, to perish with hunger, or to be devoured by wild beasts." If, as it is asserted, manual or physical labor produces all the wealth, it seems strange that a laborer who works for hire should make a better living now, when the landlord and capitalist are said to share with him, than he did when he directed his own labor and shared with nobody. In fact, the socialist strives to convince him that he will always live in the midst of abundance, with very little labor, when the State is his landlord and a swarm of officials and overseers are his masters.

In the deer and beaver case, cost of production consists of labor and is measured by a unit of labor time, e. g. an hour's or a day's labor, which is there supposed to cost everyone the same amount of his ease, liberty, and happiness, and to produce in every case the same amount in quantity or value, all the deer and also the beaver being assumed to be of a uniform size and quality.

But after stating that case, Adam Smith adds: "If the one species of labor should be more severe than the other, some allowance will naturally be made for this superior hardship, and the produce of one hour's labor in one way may frequently exchange for that of two hours' labor in the other. Or, if one species of labor requires an uncommon degree of dexterity or ingenuity, the esteem which other men have for such talents will naturally give a value to their produce superior to what would be due to the time employed about it. Such talents can seldom be acquired, but in consequence of long application, and the superior value of their produce, may frequently be no more than a reasonable compensation for the time and labor which must be spent in acquiring them. In the advanced state of society, allowances of this kind for superior hardship and superior skill are commonly made in the wages of labor; and something of the same kind must probably have taken place in its earliest and rudest period."

In this statement it is assumed that the same species of labor is of equal hardship to everybody. But this is not true. Among a nation of hunters, one would enjoy the chase, and consider the capture of beaver as very dull and irksome; another would be of a contrary opinion. In the later stages of society some prefer to be a soldier or a sailor than to follow some other occupation for the same reward, while others do not.

Nor is it true that every person will acquire the same skill in an occupation by the same experience; for example, in weaving, one operator will attend on more looms than another who has had the same practice, and do it better than the other. In "The Effects of Machinery on Wages," by J. S. Nicholson, Chap. 3, it is stated on the authority of one who knew the facts: "I have known lads to learn the use of the stocking frame and to be able to compete with men in six or eight weeks, and I have known men who have worked at the trade for years and can scarcely make a living. I know at this time a case of four men working in one room, and one of the four does as much work as the other three, and earns and receives as much money as the other three."

The esteem which hunters would have for superior skill, dexterity, and ingenuity would be indicated by giving more for two deer or beaver than for one, or more for a well-made bow or arrow than for an inferior one. Labor of itself has no value, except to keep the body and mind employed and in a healthy condition. As a means of production its value is derived from its product. If that is worthless so is the labor expended upon it. Labor, like a tree, and some other things, is known and estimated by its fruits.

2. QUANTITY OF LABOR.

It is obvious from Eq. (1) that the relative cost of commodities "a" and "b," per unit, depends

on the absolute cost of each of them. Therefore, supposing "c" or a unit of cost to be a unit quantity of labor, such unit must be a definite amount, or the theory of natural value based on "quantities of labor" becomes weak in the knees. But its chief exponent says (Ricardo, Chap. 1, Sec. 2): "In speaking, however, of labor as the foundation of all value, and the relative quantity of labor as almost exclusively determining the relative value of commodities, I must not be supposed to be inattentive to the different qualities of labor, and the difficulty of comparing one hour's or one day's labor in one employment with the same duration of labor in another. The estimation in which different qualities of labor are held comes soon to be adjusted in the market with sufficient precision for all practical purposes, and depends much upon the comparative skill of the laborer and intensity of the labor performed. The scale, when once formed, is liable to little variation. If a day's labor by a working jeweler be more valuable than a day's labor by a common laborer, it has long ago become adjusted, and placed in its proper position in the scale of value."

According to this statement, the position of labor in the scale of "quantity" is fixed by its position in the scale of "value," i. e. $\frac{n}{m}$, or relative value, measures $\frac{x}{y}$, or relative cost, instead of the contrary. If a day's labor by a working jeweler, or its product, is esteemed in the market to be more valuable than a day's labor by a common

laborer, then the quantity of labor done and suffered by the former, per unit of labor time, is proportionally greater than the labor done and suffered by the latter. The wages of a diamond cutter in Amsterdam being \$5 per day, and of a common laborer there 25 cents, then, as adjusted in that market, the comparative quantity of their labor, per day, is as 20 to 1. And in the same occupation, e. g. jewelry, with the same materials and implements, one jeweler will produce more in quantity or quality than another in the same period of labor time. So also in other occupations, including that of common labor. Nor is the difference immaterial either for practical purposes, or to the theory of natural value. As a matter of fact, two farmers will make butter from the same quality of milk, and the product of one of them will be esteemed in the market at twice the value of the product of the other; therefore, as thus adjusted, the quantity of labor done and suffered by the former is double that of the latter. In the opinion of consumers, the sweat and sacrifice of the former, as embodied in his product, exhales a perfume and has an agreeable and wholesome taste, while the sweat and sacrifice of the latter taints his product with soap-grease qualities.

According to Howell ("Conflicts of Labor and Capital," Chap. 4), in 1877 the weekly wages of engineers in England varied from 25s. to 45s.; of iron founders, in the same locality, from 24s. to

45s. He also says (Ib.) that a trade or labor union only endeavors to fix a minimum wage, below which none in that employment shall work, or at least those who are members of the union. Any uniformity in wages arises from the effort of employers to make this minimum wage the maximum in all cases, and also by sifting out the drones. Also a labor union may endeavor to prevent the careful, diligent, and efficient workman from "besting" his inferiors, but not with entire success.

According to Carroll D. Wright (Evolution of Wage Statistics — *Quar. Jour. of Economics* for January, 1892), in iron works, a crew of nine men all receive different wages, by voluntary agreement; the weekly wages of women in jewelry at Attleboro, Mass., in 1872, varied from \$4.50 to \$13; wages of workingmen in Massachusetts, in 1875, varied from \$300 to \$1,800 per annum; in 1884, the weekly wages of working girls in Boston, Mass., varied from \$1 to \$35; in 1885, the weekly wages of operatives in cotton goods varied from \$5 to \$20 and over.

A person, instead of working for hire or wages, may work for himself or profits. But there is no uniformity in profits, even in the same pursuit; for otherwise all would succeed and nobody fail in business, except from some natural and inevitable accident. There are about ten thousand insolvencies per annum in the United States, in prosperous times, with a still greater number of

cases where persons retire from business after the loss of the whole or a large part of their capital, before becoming insolvent. Young men and others, with capital or credit, are continually engaging in some business without having the personal elements necessary to success in it, and are continually failing because consumers will not reimburse them the cost to them of their contribution to the supply of their commodity. It is notorious that in the same locality and in the same occupation, one company, firm, or person does better than another, the difference being due to him or those who conduct the business. Mrs. Micawber said that the coal business on the Trent required talent and capital, and that Mr. Micawber was excluded from the business for want of the latter. Nobody would furnish it. If the government had done so, without interest, and prohibited anybody from underselling him, he might have succeeded. The Barings failed for want of talent. One popular scheme of social reform proposes to put all the young men at common labor for five years; all the voting, ruling, and managing to be done by the graybeards, who have cut their eye-teeth and retired from all labor, except headwork, on a pension. The young women to be employed as assistant teachers of political economy, and to entertain "sleepers" by taking them shopping, and with music and sermons furnished by telephone.

Adam Smith said (Chap. 5) that labor is the real measure of the exchange value of all com-

modities, i. e., that $\frac{x}{y}$ determines $\frac{n}{m}$, Eq. (1). But he says it is difficult to ascertain the proportion between the different qualities of labor. The time spent in two different sorts of work will not always determine this proportion. The different degrees of hardship endured and of ingenuity exercised must likewise be taken into account, and it is not easy to find any accurate measure of either. It is adjusted, however, he says, not by any accurate measure, but by the higgling and bargaining of the market. Therefore, according to him also, $\frac{n}{m}$, as fixed in the market, measures $\frac{x}{y}$. But the ratio $\frac{n}{m}$ continually varies; the quality of the goods varies; and for the same quality $\frac{n}{m}$ is not the same, even at the same time, to all buyers and sellers. If they are equal in all other respects one proves to be a better higgler than another; but, as a matter of fact, some of them, with equal facilities, produce n or m at less cost than the others.

He also says (Ib.), in substance, that wealth consists of means of satisfaction; that a man's labor will not directly supply him with all of these; that in order to obtain them in kind, quantity, and quality suited to his wants, his wealth must have purchasing power; having this power it gives its owner a certain command over all the labor and all the produce of labor which is in the market; and a man's fortune is, therefore, in proportion to the extent of this power, or to the

quantity of other men's labor, or, what is the same thing, of the produce of other men's labor, which it enables him to purchase or command. Thus he makes the quantity of "other men's labor" to be in proportion to its purchasing power, or to that of its product; e. g., if a week's labor by two engineers in England, in 1877, had, respectively, the purchasing power of 25s. and 45s., then the quantities of their labor, per unit of labor time, was in the proportion of 25 to 45.

3. THE DEER AND FISH CASE.

Ricardo considered that the doctrine illustrated by the deer and beaver case applied in the later as well as in the early stages of society, and said that the quantity of labor bestowed on commodities, whose production is open to competition, regulates their relative or exchangeable value. In order to harmonize this doctrine with the use of capital as an aid to labor, he said (Chap. I, Sec. 3): "Even in that early state to which Adam Smith refers, some capital, though possibly made and accumulated by the hunter himself, would be necessary to enable him to kill his game. Without some weapon, neither the deer nor the beaver could be destroyed, and, therefore, the value of the animals would be regulated, not solely by the time and labor necessary to their destruction, but also by the time and labor necessary for providing the hunter's capital, the weapon, by the aid of which their destruction was effected."

Since the hunter could not kill deer and beaver without a weapon, he must, theretofore, have acquired a surplus; for in order to make the weapon its maker must have materials, tools, and subsistence during the time of its manufacture. This surplus would not be due merely to the exercise of greater industry than was necessary to support him, but also to the exercise of frugality or abstinence from consuming or squandering what this greater industry produced. Frugality or abstinence being essential to the existence of capital, is an element to be considered. Having capital the hunter became enabled to procure a weapon and kill deer and beaver, a thing which was impossible for him to do without it. Competition in killing them would be limited to those who possessed the necessary capital; those who failed to acquire it would be compelled to subsist as they did theretofore.

Also a right of property must have then existed. And the hunter, being the owner of his weapon, would be entitled to all the benefit he could derive from it, either by using it himself or by demanding a profit for its use by others.

But assuming all men to be exactly alike, each of them would acquire an equal capital in an equal period of labor time; whereupon the author cited says (Ib.): "Suppose that in the early stages of society the bows and arrows of the hunter were of equal value and of equal durability with the canoes and implements of the fisher-

man, both being the produce of the same quantity of labor. Under such circumstances, the value of the deer, the produce of the hunter's day's labor, would be exactly equal to the value of the fish, the produce of the fisherman's day's labor. The comparative value of fish and game would be entirely regulated by the quantity of labor realized in each."

It is not said that the relative value of the two products would be adjusted in the market with sufficient precision for all practical purposes, nor that their relative value would be adjusted, not by any accurate measure, but by the higgling and bargaining of the market; but it is asserted that the value of the two products would be "exactly equal." It was necessary to be exact, for a small difference in cost or value per unit of product during a lifetime, or for a shorter period in production on a large scale, would make a great difference in the total result. A difference of a fraction of a cent per yard in the cost of making cotton cloth, or in the price obtained for it, makes the difference between success and failure in the business, and this difference might be solely due to one of its producers being a better higgler than the other. Each of them is a buyer of materials, etc., and a seller of products on a large scale.

The statement that the relative value of the two products would be entirely regulated by the quantity of labor realized in them is not true. Suppose it cost the same to kill a deer as to catch

x fish; this would not determine how many of each was wanted at that ratio. The deer might be large and fat, the fish small and poor, or vice versa. The quantity required of each at that ratio would depend upon their relative use value. If the relative demand for them at that ratio was for n times as many fish as deer, evidently n is unknown. If there were too many fishermen, the supply of fish would be in excess of the demand for them. Some fishermen therefore must become hunters; but to do so, a fisherman must abandon his skill and implements, and acquire those of a hunter. Bows and arrows being in demand, and canoes, etc., not, the implements of the hunter and fisherman would not then be of equal value. Relative demand is a regulator of relative value.

This may be shown by a formula:

If the product of each hunter's day's labor was p deer, then $x.p$ fish would be the product of each fisherman's day's labor. Assume $p=1$.

a =total number of producers,

y =total number of hunters,

$\frac{n.y}{x}$ =total number of fishermen,

$y + \frac{n.y}{x} = a \therefore \frac{a.x}{n+x} = \text{number of hunters}, \quad (5)$

$\frac{a.n}{n+x} = \text{number of fishermen.}$

All of the hunters and fishermen being exactly alike, all of them would want the same ration.

Suppose $x=2$, obviously n still remains unknown, and may be set at any figure. For $n=3: 40$

per cent would be hunters and 60 per cent fisherman. Total relative demand, 40 deer to 120 fish. Each ration would be 0.4 deer to 1.2 fish. There would be 24 surplus deer to be exchanged for 48 surplus fish, per hundred of producers.

For $n = \frac{1}{2}$: 80 per cent would be hunters, and 20 per cent fisherman ; total relative demand, 80 deer to 40 fish. Each ration would be 0.8 deer to 0.4 fish, leaving 16 surplus deer to be exchanged for 32 surplus fish.

But men are not all exactly alike ; therefore, with the same implements the best hunter would usually kill more game per day than the poorest hunter, and the product of each of them would not be "exactly equal" to that of the same fisherman. But, for the same reason, the bows and arrows of the hunters would not all be exactly alike merely because they were the product of the same number of day's labor by each of them. There is a difference in bows and arrows and in the men who use them. Everybody could not bend the bow of Ulysses, or shoot like William Tell or Robin Hood ; nor could every Israelite kill Goliath with a sling, nor with David's sling.

In every stage of society men differ, physically and mentally ; fish, game, and other things vary in quality and quantity ; one generation continually dies out and another succeeds, having different capacities, tastes, and desires from their fathers ; n , or relative demand (Eq. 5), and x , or relative cost, both vary. It is, therefore, hardly

worth while to assert or assume that all men are exactly alike, as if they were cut out by some machine, and thereupon to assert that under free competition and with equal facilities, all hunters, fishermen, or other competitors will produce the same amount in quantity or value in the same period of labor time or at the same cost. In fact, some men will produce more than others having the same facilities, from the same land, mine, factory, workshop, business, or occupation. If there is anything whose cost is uniform, i. e., the same to everybody, it ought to be pointed out, so that those who make a poor living, or fail in business, might engage in its production and succeed as well as anybody.

4. THE SUPPLY REQUIRED.

The author cited also says (Ricardo, Chap. 2): "The exchangeable value of all commodities, whether they be manufactured, or the produce of mines, or the produce of land, is always regulated, not by the less quantity of labor which will suffice for their production by those who have peculiar facilities of production, but by the greater quantity of labor necessarily bestowed on their production by those who have no such facilities; by those who continue to produce them under the most unfavorable circumstances, meaning by the most unfavorable circumstances the most unfavorable under which the quantity of produce required renders it necessary to carry on the production."

From this it follows that since one person, with the same facilities, will produce more than another in the same period of labor time, from the same land, mine, factory, or workshop than another, he does it by a less "quantity of labor." Also, it is the quantity of labor "necessarily bestowed" on the most costly portion of "the supply required" of it, which is the foundation, cause, or measure of the exchange value of the whole supply, per unit of quantity. When the cost of a product is not uniform or the same to everybody, "the quantity of produce required" determines the quantity of labor which must be necessarily bestowed on the most costly portion of such supply. Wherefore, it would seem to be the fact that relative demand is the regulator of the exchange value of commodities, by determining how much cost shall be expended on the most costly portion of the supply required of each.

When the cost of a product is not uniform, $x.c$ or $y.c$ (Eq. 1) represents the cost per unit of the most costly portion of its supply.

Every two commodities, the cost of both of which is not uniform, have an indefinite number of natural values.

First. Suppose that the supply required of a product whose cost was not uniform remained constant; if the production of the less costly portions of such supply increased or decreased, the cost of the most costly portions of such supply would vary. Some of the more efficient pro-

ducers might die, or change their product for one which produced a greater profit, or by increasing their production save in cost per unit of product and make a greater total profit by taking a smaller profit per unit of product.

Secondly. Suppose the cost of commodity "a" is uniform at 40c. per unit, while the cost of "b" is not uniform, the cost of the most costly portion of its supply being 15c. per unit, then their relative value is "natural" when three units of "a" have the same market value as eight units of "b." If the supply required of "b" increased, the cost of the most costly portion of such supply would increase or decrease, depending upon whether such increased or decreased supply required an increased or decreased cost per unit for its production, e. g. 15 ± 5 . For the plus sign, the relative value of "a" and "b" would be called natural when one unit of "a" had the same market value as two units of "b." For the minus sign, their relative value would be natural when one unit of "a" had the same market value as four units of "b."

If the cost of both "a" and "b" was not uniform, then $\frac{x}{y}$ (Eq. 1) might become $\frac{x \pm h}{y \pm k}$.

5. GOLD AND SILVER.

In treating of money, the author cited says (Ricardo, Chap. 27): "Gold and silver, like other commodities, are valuable only in proportion to the quantity of labor necessary to produce them and bring them to market. Gold is about fifteen

times dearer than silver, not because there is a greater demand for it, nor because the supply of silver is fifteen times greater than that of gold, but solely because fifteen times the quantity of labor is necessary to procure a given quantity of it."

According to this statement, if silver cost fifteen times as much as gold, to procure an equal quantity of it, silver would be fifteen times dearer than gold; and if they could be procured at the same cost, their value would be the same for equal weights of each. But if everybody preferred gold to silver in dentistry; a gold watch to a silver one; money, plate, jewelry, and ornamentation of gold; and if gold, in addition to being more beautiful and durable than silver, were more suitable for all purposes, then no silver would be wanted at an equal cost. Who would pay the same price for an inferior article? But if silver has a greater use value than gold for some purposes, as being more sonorous, the best conductor of heat and electricity, of great use in photography, and for various purposes in chemistry and the arts, a supply of silver might be required to answer some or all of these purposes, although its cost equaled or even exceeded that of gold. Gold was "about" fifteen times dearer than silver, because it was wanted at its price, and not merely because it cost fifteen times more to produce it than silver. Neither metal could be procured unless its exchange value were sufficient to induce its production.

Since about 1873 silver has been largely disused for money. Germany adopted a gold standard, and other countries have done and are doing the same; also, electroplate, German silver, and other alloys have largely supplanted silver for various other purposes. Although the production of both metals has very greatly increased since 1873, yet in 1896 gold was over thirty times dearer than silver.

The cost of procuring either metal is not uniform. Therefore, the author might have said that gold was about fifteen times dearer than silver solely because the cost of the most costly part of the supply required of gold was fifteen times greater than the most costly part of the supply required of silver, for equal weights of each. And unless he ascertained in units of labor what was the quantity of it "necessarily bestowed" on the most costly portion of the supply of each metal, per ounce, or other unit of quantity, he probably measured the relative cost of their production by their relative market value for equal weights of each, and which then made gold "about" fifteen times dearer than silver.

Gold occurs in an almost pure state in the beds of streams, in alluvial deposits, in certain rocks, and also combined with other metals and substances in veins or lodes. Silver rarely occurs native, but is found in deposits and veins of its ores combined with other metals and substances, sometimes with gold. The deposits and veins of

both metals vary greatly in richness and facility in mining and extracting the precious metal. The same mine varies continually in this respect, rarely producing for any length of time a uniform kind and quantity of ore. In some cases the precious metals, or one of them, is the chief product, and the baser metals, or some one or more of them, are a by-product. In other cases the precious metal is the by-product. There are mines of lead and of copper containing precious metal, and especially silver, in the ore, which would be extracted although its value was quite nominal. Twenty ounces or less of silver in a ton of pig lead greatly injures its value. In some countries mining is done mainly by manual labor, and the ore reduced by crude and primitive methods; in others, mining and reduction of the ore is done by and with the latest improved methods and machinery.

Some countries produce gold only, as Africa, Brazil, also formerly the United States and Australia; others, silver, as Peru; others produce both. Great Britain produces neither, except to a very small amount and as a by-product; yet the London quotations fix daily the relative value of gold and silver throughout the commercial world.

Those who produce the most costly portion of the supply of either metal, wherever they may be, do so for a reward, actual or expected, which they deem adequate, each of them measuring cost and its reward for himself. A Chinaman will work over a placer which has been abandoned by an Ameri-

can and find gold enough to reward his sacrifices. According to Jacobs ("Precious Metals," Chap. 25): "In Columbia, river washing is extensively practiced. The sand at the bottom of the rivers abounds in particles of gold and platinum, but the labor is attended with little profit. It is carried on by an indolent race of independent peasants, who have few wants, and who, by some exertion and occasional success, gain sufficient to subsist on scanty resources."

The cost of foreign products, e. g., gold and silver in England, is the cost of their acquisition (Ricardo, Chap. 7). If an English trader exchanged or exchanges glass beads, colored cloth, rum, etc., for gold on the coast of Guinea, in this exchange of equivalents (?) the trader might say that the negro's reward outweighed its cost, or else he would not have worked for it, and might also say the same as to an exchange of English wares for gold with an Asiatic or a South American Indian, or for silver with a Peruvian or Mexican. Neither metal would be acquired always, everywhere, and by every trader, or any one of them, at the same cost.

It is the exchange value, or general purchasing power, of either metal which justifies its production or acquisition, and not merely its value relative to the other; therefore, if the exchange value of either be increased by any means affecting the demand for it, that will extend the margin of its production and increase its supply, while a

decrease in its exchange value, caused as above, will discourage its production and tend to decrease its supply. Also, a decrease in the cost of production of either, caused, e. g., by improvements in mining and metallurgy, stimulates its production and tends to increase its supply.

According to the report of the Director of the Mint for 1896, p. 221, the average commercial ratio of silver to gold during 1894 was 32.56; during 1895 was 31.60; during 1896, 30.66, or an average for the three years of 31.27 to 1.

The same report, p. 46, gives the approximate stock of money in the principal countries of the world in dollars (counting gold per fine ounce=\$20.671834, and silver per fine ounce=\$1.292929, p. 230). Gold, \$4,143,700,000; silver, full tender, \$3,616,700,000; limited tender, \$620,200,000; uncovered paper, \$2,558,000,000.

The product of both metals has been increasing for many years, very great improvements having been made in mining and in metallurgy. As to the effect of the cyanide process, see p. 132 of the report. The production during 1895 was: Gold, fine ounces, 9,694,640=\$200,400,000; silver, fine ounces, 168,308,353=\$217,610,800 (p. 232 of the report). At this rate of production the amount produced in about twenty years would equal the world's present stock of gold and silver coins.

Although the most costly portion of the increased and increasing supply of silver has been,

and continues to be, produced at a profit sufficient to induce its production, the producers of silver and others, who constitute a numerous and powerful party, insist that the relative value of the two metals shall be fixed arbitrarily and by force of law at a ratio more favorable to silver than the existing commercial ratio, by means of what is called bimetallism, or the free and gratuitous coinage of the two metals at such fixed legal ratio. Since everything is bought and sold for money the world over, it is insisted that international bimetallism at a fixed ratio as above will cause the commercial ratio to agree with it, although free coinage by one nation only would not have that effect, but merely cause its money to consist of the cheaper metal.

If bimetallism as above were universally adopted, unless there were a uniform system of coinage, foreign trade would be carried on as now, by estimating metal, whether coined or not, as so much bullion. A people accustomed to pounds, shillings, and pence, or other system of money, would hardly consent to use strange coins and systems of money, or precious metal in the form of bullion, as it was used in the time of Abraham. Also, although both metals were freely coined everywhere, a whole people, or a whole community, or individuals separately, might, and probably would, stipulate for payment in the kind of coin which they preferred, and which would probably be the one with which they

had become familiar, and by means of which they had been accustomed to estimate values. Also, some nations prefer to have a large part of their currency in paper money, and some from choice or necessity have no other kind. Heretofore every nation has adopted a kind and system of money which suited its people and their condition.

International bimetallism would be indefinitely postponed if it were necessary to wait until it was universally agreed to. If the countries which now refuse free coinage to silver, or the principal part of them, as, for example, the United States, Great Britain, Canada, Egypt, Australia, France, Germany, Belgium, Austria-Hungary, Netherlands, Denmark, Sweden, and Norway, would agree to adopt bimetallism at the ratio of, e. g., $15\frac{1}{2}$ to 1, it would be quite as much as can be expected. Those using a paper or silver currency may be omitted. The money of the countries above named, expressed in United States dollars coined at the ratio of $15.988\frac{1}{2}$ to 1, consists of \$3,255,000,000 in gold; \$1,214,800,000 in full tender silver; and \$1,113,200,000 in uncovered paper (Report of the Director of the Mint for 1896, p. 46). According to the above report, p. 232, the world's production of gold and silver during 1895, expressed in United States dollars, was \$418,016,800. Deducting one-fifth of this for the new bullion used in the industrial arts, and assuming that all old material derived therefrom is again used solely for that purpose, then at the rate of production of the precious

metals during 1895 there could be added to the currencies of the gold-standard countries above named, coin to the amount, as expressed in United States dollars, of \$335,000,000 per annum, which, in less than fourteen years, would double the full legal-tender coins of those countries, and enable them also to double their present stock of uncovered paper. All of the new bullion would be coined in gold standard countries. For silver, when coined there, would have its purchasing power doubled and a debt-paying power at the fixed ratio equal to gold. For example, every debt payable in England would become at once payable in silver pounds sterling coined at the ratio, e. g., of $15\frac{1}{2}$ to 1. No gold or silver bullion would be coined in silver standard countries, e. g., into rupees; for the silver in those countries must rise to its value as bullion, which would probably be caused by its exportation for coinage in the gold standard countries.

International bimetallism as above, if adopted and enforced, would double the gold price of silver, enrich its present producers, extend the margin of its production, greatly increase its supply, decrease prices and increase debts in silver standard countries, raise prices, lessen debts, encourage speculation, and (it is said) thereby give a fillip to business in gold standard countries.

An advocate of bimetallism (F. A. Walker), who favors cheap money and the "fillip" idea, declines to base his argument on any specific

ratio, with good reason, for the question is, bimetallism being agreed to, how cheap shall money be made? Since the coinage ratio to be adopted is purely arbitrary, suppose it were fixed at 1 to 1. The total output of silver during the two years 1894-5 was 332,918,747 fine ounces (above report, p. 232), which at \$20.67 per ounce would coin into, in United States dollars, over \$6,769,000,000; three years of product would coin into more than the world's present stock of coins. This hardly seems desirable, unless a confiscation of all debts and the adoption of a Chinese currency is considered to be so. How much ought debts to be confiscated and prices be raised in order to give the proper "fillip" to business?

Another advocate of international bimetallism ("Popular Fallacies Regarding Bimetallism," by Sir R. P. Edgcombe, p. 143) says that the Argentine paper dollar, worth one-quarter its nominal value in gold, enabled that country to undersell India in wheat, whose silver rupee had only depreciated one-half. Sundry American advocates of bimetallism insist that the depreciated India rupee has enabled that country to undersell the United States in the same article. From this it would seem that if the United States would adopt a paper currency more depreciated than that of Argentine, this country could undersell all the world in all products. The proper way to enrich this country is to make the dollar smaller.

If a cheap money is desirable, why not have an exclusively paper currency? It is workable although made very abundant. After it has given one "fillip" to business, make the money more abundant and give business another "fillip." Why not adopt an international paper money, so that no nation will be enabled to enrich itself and undersell others by cheapening its money, and the whole world thereby enjoy "the endless benefits of a common currency" at a nominal cost?

It is asserted by the advocates of the free coinage of silver that gold has appreciated since 1873, relative to other things, because their gold price has fallen; not because of the decreased cost of their production, but because of the appreciation in the value of gold. Wages have greatly increased since 1873, as estimated in gold coin. Hence, gold has not appreciated, but in fact depreciated relative to wages; gold wages have increased greatly, and real wages, or the purchasing power of money wages, still more. This point is attempted to be evaded by saying that the laborer gets a larger share of the product than he did before. But his labor, aided by improved methods and machinery, has become more productive than it was in 1873, so that although he gets more product, it does not follow that he gets a larger share of the total product than before. Whether he does or not, in this country money wages are paid in gold or its equivalent, and since the laborer gets more gold for his labor than he did

in 1873, therefore, in this country at least, gold has depreciated relative to labor. According to very high authority, labor is the real measure of the exchange value of all commodities. In the Presidential canvass of 1896, the laborers generally failed to see that wages paid in cheap dollars would benefit them. If it were desirable to pay them in such dollars, it could be more readily effected by a paper inflation of the currency than by its inflation with silver dollars coined at $15\frac{1}{2}$ to 1.

The effect of international free coinage would seem to be to discourage the production of gold and encourage the production of silver; to narrow up the margin of production of the former, and extend that of the latter.

6. AN AGGREGATE SUM OF LABOR.

In another illustration of the theory that the exchange value of products is in proportion to the quantity of labor, direct and indirect, bestowed on their production, it was said (Ricardo, Chap. 1, Sec. 3): "In estimating the exchangeable value of stockings, for example, we shall find their value, comparatively with other things, depends upon the total quantity of labor necessary to manufacture them and bring them to market. First, there is the labor necessary to cultivate the land on which the raw cotton is grown; secondly, the labor of conveying the cotton to the country where the stockings are to be

manufactured, which includes a portion of the labor bestowed in building the ship in which it is conveyed, and which is charged in the freight of the goods; thirdly, the labor of the spinner and weaver; fourthly, a portion of the labor of the engineer, smith, and carpenter who erected the buildings and machinery, by the help of which they were made; fifthly, the labor of the retail dealer and many others whom it is unnecessary to particularize. The aggregate sum of these various kinds of labor determines the quantity of other things for which these stockings will exchange, while the same consideration of the various quantities of labor which have been bestowed on those other things will equally govern the portion of them which will be given for the stockings."

Although not mentioned in the statement above quoted, yet the fact is that no one would prepare land for cultivation, build ships, make stockings and other things for the purpose of exchange unless a right of property existed and its owner was protected in its enjoyment; therefore, a portion of the various kinds of labor expended to protect persons and property on land and water against robbers, pirates, and others who claim an equal right to the earth, would figure in the above mentioned "aggregate sum" unless such protection was furnished gratis.

Also the cost of a foreign product, e. g. cotton in England, is the cost of its acquisition, and

not of its production (Ricardo, Chap. 7). In order to state "an aggregate sum" correctly there must be not only a proper unit, but also the proper items. Therefore, it seems quite proper to inquire what the stockings cost their maker. The producers of cotton, machinery, etc., sell their products, either directly or indirectly, to him, so that it is the cost of the stockings to him relative to their exchange value which induces their production by him. The cost of the cotton, mill, machinery, etc., to him would be the then value of what he gave for them, whatever may have been theretofore the cost to him of acquiring the means necessary to make the purchase. Whether he obtained such means by the very painful exercise of industry and frugality during a long period of time, or from profits realized by him in the production of the less costly portion of the supply required of some commodity, or from speculations in buying and selling, or by gift or inheritance, his capital would equally enable him to engage in the manufacture of stockings.

 Laborers, although properly instructed and directed, can not build a ship, make machinery, etc., unless they are provided with subsistence, implements, and materials. No one can produce anything for sale unless he possesses means sufficient to procure the necessary materials and implements, and to support him until his product by its sale will replace his outlays; thereafter his further outlays are made from the replacement of

his capital by the sale of his product, if sufficient for the purpose.

The theory of natural value is based on free competition, which is limited to those who have the necessary capital and are induced by a sufficient motive to take part in it. They determine, in view of the present and prospective market value of commodities, what things shall be produced for sale, each of them deciding for himself what his product shall be. If every competitor thought he could obtain a better reward for his labor and capital in some other way, no cotton stockings would be produced for sale; for in such case their exchange value, in the opinion of each competitor, would be below their cost of production to him. The relative cost of products, which is said to regulate their relative value, is their relative cost to those who own and produce them in the market for sale.

Those who work for hire do not determine the nature of the product nor the method of its production. If any of them do, they are not ordinary hired men, but as managers or foremen are paid, often large sums, for their mental labor and business ability. Hired laborers do what they are directed to do by their employer for a reward to be paid to them whether their labor produces anything of value or is profitable to their employer or not; that is a matter for him to consider. When there is a loss his hired men set up no claim to a share in it. The cost of hired labor to him is

the value of what he pays for it. Wages is one of his outlays, which he pays out of his capital when he begins business, and thereafter from its replacement by the sale of his product, if sufficient for the purpose, and if not, then from his other resources.

According to the author cited, the cost of the stockings consists of the labor bestowed on the cotton and a portion of the labor bestowed on the ship, mill, machinery, etc. The stocking-maker, by the purchase of them, steps into the shoes of their producers, who, without capital, could not have produced them; for even the hunter could not kill game without a weapon. If no more stockings could be produced by the same "quantity of labor" intelligently directed, or "necessarily bestowed," when a part of it is indirectly expended upon a knitting mill than if all the labor were directly expended in knitting the stockings by hand, there would be no motive for building it; nor would there be any such motive unless the stocking-maker could gain something by its use, instead of employing laborers to spin the yarn on spinning wheels and knit the stockings with knitting needles. How they could make the stockings without implements of some kind would seem to be more difficult than to kill game without a weapon.

But it is said that while implements are productive of quantity, they are not productive of value. For (Ricardo, Chap. 20): "If an improved

piece of machinery should enable us to make two pair of stockings instead of one, without additional labor, double the quantity will be given for a yard of cloth. If a similar improvement be made in the manufacture of cloth, stockings and cloth will exchange in the same proportion as before, but they will both have fallen in value; for in exchanging them for hats, for gold, or other commodities in general, twice the former quantity must be given. Extend the improvement to the production of gold and every other commodity, and they will regain their former proportions. There will be double the quantity of goods annually produced in the country and therefore the wealth of the country will be doubled, but this wealth will not have increased in value."

But, in such case, every commodity, per unit of quantity, would have the same purchasing power as before the increase; and the number of units being doubled, their value expressed in terms of a unit of any one of them, as an ounce of gold, would be doubled, although their ratio of exchange per units of quantity remained the same. Also, in such case, if a hired laborer, operating the improved machinery, received for the same "quantity of labor" the same number of units of commodity as before, they would have the same purchasing power and the same value to him as before; the increase in quantity being due, as above supposed, solely to the improved machinery, would justly belong to its owners.

If the original quantity were doubled, not by improved machinery, but by the laborers working longer hours and with greater diligence, or by doubling the number of laborers, commodities would, according to the author cited, exchange in the same proportions as before. In this case, also, there would be double the quantity of commodities produced in the country, and therefore the wealth of the country would be doubled, but this wealth would not have increased in value any more than if the quantity were doubled by using improved machinery, as above supposed.

The author cited also says (Chap. 20): "If ten men turned a corn mill, and it was discovered that by the assistance of wind or water, the labor of these ten men may be spared, the flour which is the product partly of the work performed by the mill would immediately fall in value in proportion to the labor saved." If so, the owner of the old mill would gain nothing by discarding it for the new one, even if he could have it for nothing. It is also said (Ricardo, Chap. 30): "If the natural value of bread fell 50 per cent, the demand for it would not greatly increase, for no one would desire more than would satisfy his wants, and, as the demand would not increase, neither would the supply, for a commodity is not supplied because it can be produced, but because there is a demand for it." In such case consumers would obtain their supply of bread for one-half as much of their products as before, thus leaving the other half

unsold, while those whose labor was saved would be compelled to compete with them in order to obtain their supply of flour and other necessaries.

If double the original quantity of bread was produced, the supply would be nearly 100 per cent in excess of the demand. And since the supply must conform to the demand in order to exchange or sell at its natural value, it follows that misdirected labor confers no value, or at least no value in proportion to its quantity. Somebody must determine beforehand whether there is a demand for a product, and if so take the risk that the supply is not in excess of the demand. Hired laborers merely perform the task assigned to them; whether the result of their labor will be worth much, little, or nothing is not for them to determine. Their claim to a reward rests upon the ground of monopoly; an employer can have their labor by paying for it, otherwise not. The least they can permanently accept is a subsistence for themselves and their families; the most an employer can afford to give is an amount which will leave his capital intact and also a support for him and his family. Between these limits the amount of reward to be paid for hired labor is a matter of negotiation between the parties. When the employer can gain by adopting improved methods and machinery, he adopts them instead of using hired labor.

A blind horse hitched to a lever, with his halter fastened to a pole in front of him, will lead

himself round and do the work of several men, or the propelling force may be wind or water.

Adam Smith says that, in the first steam engines, a boy was constantly employed to open and shut alternately the communication between the boiler and the cylinder, according as the piston ascended and descended. A boy thus employed observed that by tying a string from the handle of the valve which opened the communication to another part of the machine, the valve would open and shut without his assistance. Thereupon the string dispensed with the labor of the boy.

He also says: "A broad-wheeled wagon, attended by two men and drawn by eight horses, in about six weeks' time, carries and brings back between London and Edinburgh, near four ton weight of goods. In about the same time a ship navigated by six or eight men, and sailing between the ports of London and Leith, frequently carries and brings back 200 ton weight of goods. Six or eight men, therefore, by the help of water carriage, can carry and bring back in the same time the same quantity of goods between London and Edinburgh as fifty broad-wheeled wagons attended by 100 men and drawn by 400 horses. A train of cars, attended by six or eight men or less, will now carry between the same points a much greater quantity of goods in less than one-tenth of the time. An ocean steamer, carrying thousands of tons of freight and hundreds of passengers, will cross the Atlantic in a week.

In the time of Adam Smith, ten men, by exerting themselves, could make 48,000 pins in a day. In 1888 a machine made 180 pins of a greatly superior quality in a minute. The coil of wire was put in its proper place, the end fastened, and the almost human piece of mechanism with its iron fingers did the work. Seventy machines were tended by three men, while a machinist with a boy helper kept them in order. After allowing for stoppages, the machines produced per day over 20,000 papers of pins of 300 pins each. ("Recent Economic Changes," by Wells, p. 60.) In Adam Smith's time an expert nailer could make several hundred nails per day; now a machine makes them by the kegful.

The cotton gin superseded a great part of the labor previously required to separate the cotton from the seed; and machinery now, almost automatic, converts the cotton into a great variety of fabrics. The age of handcraft ended and the age of machinery began about 1770-80. According to Mulhall, spinning machinery attended by one operative produced as much yarn in 1815 as 200 could a few years before; in 1855 the ratio had more than tripled. The crane at the Cologne Cathedral, in 1870, with two men did the same work, in lifting stone, in one hour as required sixty men working twelve hours in the middle ages. A California harvester cuts, threshes, and bags sixty acres of grain in a day, and a roller mill will make 10,000 barrels of flour in the same time.

Implements and machines do better work than can be done without them, and work which would be otherwise impossible. Watt thought that he had done well when he made a piston and cylinder agree to within three-eighths of an inch; now they can be made so accurately that the piston feels quite loose in the cylinder when their diameter differs only one-five-thousandth part of an inch. Instruments measure distance, area, volume, weight, time, force, light, heat, velocity, electricity, gild, carve, set type, talk, play music, make pictures, discover microbes, nebula, and the elements composing the stars, send a message around the world in a few seconds and the human voice a thousand miles. There is also the machine to make a machine.

In the early stages of society, laborers make their own implements and therewith kill deer, beaver, and catch fish. Population is sparse and their living poor enough. In the later stages of society, the producer, with his own capital or borrowed, buys his materials and instruments, hires laborers to work for him, and if the exchange value of his product exceeds his outlays, he makes a profit, otherwise not. Whereupon, taking linen instead of cotton stockings, it is said (J. S. Mill, B. 3, Chap. 4): "The flax spinner, part of whose expenses consists of the purchase of flax and of machinery, has had to pay in their price, not only the wages of the labor by which the flax was grown and the machinery made, but the profits of

the grower, the flax dresser, and the machine maker. All of these profits, together with those of the spinner himself, were again advanced by the weaver, in the price of his material, linen yarn; and, along with them, the profits of a fresh set of machine-makers and of the miners and iron workers who supplied them with their metallic material. All of these advances form part of the cost of the production of the linen. Profits, therefore, as well as wages, enter into the cost of production, which determines the value of the produce."

To this he might have added, that all these wages and profits make linen cost less per yard than if the grower of the flax had made the linen himself. Every additional person who participates in the production of linen does so only by being able to reduce its cost. And although every capitalist, directly or remotely concerned in its production, and so also of other things, is above supposed to get a profit, the hired laborer obtains for his labor, necessaries, comforts, and luxuries beyond anything conceived of the savage laborer, who, "in that original state of things which precedes both the appropriation of land and the accumulation of stock," gets the whole product.

According to Mulhall, the population of England in 1780 was about nine and one-half millions; in 1880, over thirty-five millions, during which time the ratio of paupers to population greatly decreased; the wages of common labor increased

two and one-half times; real wages more. The increase in population is sufficient evidence of an increase in the well-being of the people. The hired laborer who competes with and is superseded by some machine finds new demands for his labor and obtains more for it than before. Those laborers who can attend on machinery claim and get higher wages for their intelligence, skill, and mental labor. Mere physical force can be exerted by a machine or a beast. Both the hired laborer and his employer get a less reward per unit of product than in the days of hand-craft, but receive a much greater total reward. The greatly increased quantity of products furnishes more to consume and more to exchange at home and abroad.

7. COST OF PRODUCTION.

The cost of a product to its producer consists of his outlay expended on it, with a profit sufficient to induce him to produce it. This is the debit side of the account, for which the realized value of the product must compensate him or else there is a loss. What reward will induce a person to engage in or to continue to produce a thing is estimated by himself. If, however, he invests his capital and labor in any business, it may be thence inferred that the expected reward exceeded its expected cost, and, if he continues in the business, not merely to retrieve his capital, it may be thence inferred that he obtains a reward

which is by him deemed adequate and, in his opinion, is at least as great as he could otherwise obtain at the same cost to him.

A producer makes outlays for plant (fixed capital), for materials, hired labor, etc. (circulating capital). The plant deteriorates as time elapses, wears out, and may become old lumber by being superseded by something better. The materials are used up, the amount paid for hired labor, etc., is gone. His wealth exists "in supposition." Its investment lies open to loss from the elements; his own incapacity; the inefficiency, negligence, ill-will, and dishonesty of his employes; the wrongful acts of evil-doers, and the fluctuation in the value of what he buys and what he sells. Present goods are certain and have a present value; future goods are uncertain as to their existence, amount, and value. Money, or money's worth, embarked in business does not always return to its owner, with or without a profit. Unless the value of the fixed capital as it oozes out of the plant is absorbed by the product it evaporates; unless the value of the circulating capital reappears in the product it ceases to circulate; and unless, on a proper balance struck between receipts and outlays, there is a balance in favor of the former he has lost among other things his labor.

In August, 1894, the operatives in the cotton mills at Fall River and New Bedford struck, at which time, as stated in the newspapers, plain

cotton cloth sold at $2\frac{5}{8}$ cents per yard; wages being a cent a yard, besides which, there were repairs, depreciation of plant, materials, motive power, waste, cost of marketing goods, bad debts, taxes, and insurance.

Outlays are made in money, the product is sold for money, and the profit or loss stated in money. Since everything is bought and sold for money, every person, in order to compare his reward with the sacrifice which he makes to obtain it, takes the money unit as the unit of cost and value to him, the cost of which to him is the cost of its acquisition by him, and its value to him is the benefit which he can derive from it or by means of it, and which must exceed or outweigh its cost to him in order to furnish a motive for its acquisition. The money unit furnishes a measure of both, although it does not represent the same amount of either to everybody nor always to the same person, even if no alterations are made in the money. The wages of labor consist of money or money's worth, and money wages better enable a laborer to compare his reward with his sacrifice than payment in kind or out of a truck store.

In socialism, labor for a certain period of time, e. g. an hour, is taken as the unit of cost and value, it being falsely assumed that labor for the same period of time causes the same amount of sacrifice to every person who undergoes it; that in such time each of them will produce the same amount in product or value, and that the same amount of

product will afford everyone the same amount of satisfaction. If any difference is supposed to exist between one kind of labor and another, such difference will be determined not by the laborer but by his overseers. Everything will be considered worth, in certificates of labor time, the quantity of labor time bestowed on its production, regardless of its quality; e.g., a horse will be worth the same, if blind, unsound, and vicious, as if he was sound and kind. But it seems reasonable to suppose that any one who was compelled "to do time" under ground, in the mines, or on the surface at any work which was disagreeable to him, and who received for his certificates of labor time stale eggs, butter, meat, vegetables, and other things of an inferior quality, would consider a fluctuating paper currency in a state of freedom a better measure of cost and value than certificates of labor time in a state of slavery.

Profit is said to consist of interest on capital, insurance against risk, and wages of superintendence (J. S. Mill, B. 2, Chap. 15). It being said that the return for abstinence from consuming the capital is interest at the current rate on the best security; such security as precludes any appreciable chance of losing the principal; that the rate of profit greatly exceeds this, a part of which is compensation for risk, called insurance; for capital embarked in business is always exposed to some and in many cases to very great danger of partial or total loss, for which there must be com-

pensation, or the risk will not be incurred; that to control the operations of industry with efficiency requires great assiduity and often no ordinary skill, which must be remunerated; the rest of the profit goes for this purpose, called, as above, wages of superintendence.

The wealth of this country is said to have increased about 50 per cent in the decade 1880-90, a period of peace and great prosperity, being an increase of a little over 4 per cent per annum. During the same time the population increased over 30 per cent. A large part of this increase in wealth consisted of savings from wages and salaries; the deposits in the savings banks alone amounted in dull times, after the panic in 1893, to wit, in 1894, to over \$1,800,000,000. The current rate of interest during the above period was not less than 4 per cent per annum. Deducting the savings of hired labor, either risk was great or the abstinence, assiduity, and skill were small. According to Giffen, the increase in the wealth of Great Britain in the decade 1875-85 was less than 25 per cent. The money sunk in the Panama Canal was largely derived from the savings of French laborers.

Misdirected and mismanaged capital produce loss instead of profit. In time past many States of the Union spent large sums on canals and roads, few of which proved to be of any value, the result being high taxes, general poverty, and in some cases State insolvency. Prior to 1589 Sir

Walter Raleigh sunk £40,000 in his efforts to colonize Virginia. One-fourth of this sum at 5 per cent per annum, compounded half-yearly, would now greatly exceed the present wealth of Great Britain. So also would a penny at the time of the Norman Conquest.

Because the owner of capital can demand interest, capital is said to beget a profit, and therefore to be capable of perpetual growth and increase. But capital can also beget a loss. Many discover that capital has wings; that its essence, value, is volatile. Debts are not always paid in full with interest; even banks and governments sometimes make default in payment, and some who hide their treasure fail to find it again. Besides loss from the elements, war, civil commotion, and the acts of evil-doers, there is great risk that the person who embarks his capital in business does not possess the personal qualities necessary to control his operations with efficiency. No underwriter will insure against this risk. Whether capital will beget a loss or a profit depends on its manager, inevitable accidents excepted.

In the same locality and in the same business one person or company will do better than another, the difference being due to the management. In 1891, of the 110 mills at Oldham, England, the stock of sixty-seven of them was at a discount ("Methods of Industrial Remuneration," Schloss, p. 148, note). Of sixty-seven manufacturing companies in Massachusetts, engaged in

various kinds of business, including cotton and woolen manufactures, bleaching, belting and machinery, being all or which figures are given for ten years, to wit, 1882-92, a period of great prosperity, five stopped, seven had their capital impaired and renewed, and twelve increased their capital. These twenty-four companies taken together paid less than one-half of 1 per cent per annum on their capital stock, and the whole sixty-seven taken together paid 2.06 per cent per annum on the average value of their capital stock. (*Social Economist* for September, 1892.)

Of two similar mills making plain cotton cloth, one better managed than the other will make a greater profit, or make a profit while the other makes a loss, by saving in outlay and gain in the value of the product, as, by saving in repairs, depreciation, waste, employing more efficient, careful, and honest employes, buying suitable material and selling product at the right time and to solvent parties. Cotton is not of uniform quality in the fiber, nor equally free from moisture, sand, dirt, and leaves. Both materials and product vary continually in price.

Profit varies with the person according to his abilities and good fortune. Every owner of loan capital does not obtain the same rate of interest on the same security. Even the public funds vary in price. If a farmer with a capital equal to 1,000 quarters of corn produces 1,200 quarters one year, his product will probably be more or

less the next; and his profit would not be 20 per cent in corn unless the product was of the same quality as his capital, nor in value, unless the product per quarter was worth the same as the outlay. Also if one farmer, on an average, made a profit of 20 per cent in corn or in value, all farmers with an equal capital will not do the same, nor will others in other occupations all make that profit by becoming farmers.

Those who make the greatest profit on their capital often do so by making a low rate of profit per unit of product and by quick sales turn over their circulating capital often during the period for which profit is computed. And it is the total profit which a person can make in his occupation that determines the direction of his competition, while it is the cost per unit of product that is said to determine its natural value.

It is said (J. S. Mill, B. 2, Chap. 15): "Profit varies greatly with the person, and can scarcely be the same in any two cases. It depends on the knowledge, talents, economy, and energy of the capitalist or of the agents he employs, on the accidents of personal connection, and even on chance. Hardly any two dealers in the same trade, even if their commodities are equally good and equally cheap, carry on their business at the same expense or turn over their capital in the same time. That equal capitals make equal profits as a general maxim of trade would be as false as that equal age or size gives equal bodily

strength, or that equal reading or experience gives equal knowledge."

But it is said that profit is no part of the cost of production, but is only a deduction from the product of the hired labor; a tribute levied on it by the owner of capital by means of his monopoly.

Adam Smith said that a master would have no interest to employ a workman unless his stock was replaced with a profit, which is a share in the produce of his workmen or in the value which their labor adds to the materials on which it is bestowed; that perhaps it may be thought that profit is only a different name for the wages of a particular sort of labor, the labor of inspection and direction; that profit bears no proportion to the quantity, hardship, or ingenuity of this supposed labor; that in many great works almost the whole labor of this kind is committed to some principal clerk, whose wages express the value of this labor of inspection and direction.

When capital is invested in great works or small ones, it must be replaced or the master would suffer loss, and if the workmen are paid wages, that must also be deducted, wherefore the profit can not be greater than what is left.

But works, great or small, do not necessarily make a profit, large or small, so that there is an element affecting the result which is not considered when it is said that profit is a share in the product of the hired labor. It being evident that great works would grow small and small ones

grow smaller without a manager, it is obvious there must be some "supposed labor" of inspection and direction; and if only a part of it is done by a principal clerk, his wages fail to express the value of the whole of it.

Suppose there is a loss or no profit, the workmen can say, we obeyed the orders and directions given to us; we are not responsible for the result; we are entitled to our wages wholly irrespective of the result. The principal clerk can also say, I executed in detail the general orders given to me, therefore I am entitled to my wages like the other hired men. I did not determine the general or specific nature of the product, sell it, or buy the materials. Or, suppose he does all the "supposed labor" of inspection and direction, and there is a loss. He could say: I was employed to run the works and produce the commodity which constitutes its product, e. g. cotton stockings, thread, cloth, bicycles, or some other article. There was no adequate demand for the product, the business was already overdone, or the price of materials and labor was too high, etc. And even if his employer could say: Mr. A. ran his works and made a profit while you made a loss, the principal clerk might reply, I performed my duty to the best of my ability and that is all I agreed to do; therefore pay me my wages.

An owner of a ship and cargo employs a captain and crew to make a certain voyage. The crew set and furl the sails, raise and drop the

anchor as directed. The ship arrives at the destined port, the cargo is landed and disposed of as directed. The captain and crew earn their wages irrespective of the result, and are entitled to no more or less, whether there is a profit or a loss.

Another author (Rodbertus) asserts that goods are the product solely of the labor, direct and indirect, which performs the material operations necessary to their production. For example, a newspaper is the product solely of those who perform the material operations necessary to make the paper, ink, type, printing press, and to print the newspaper. Obviously some "head-work" was necessary to effect this final result. But waiving this, the value of the newspaper, except for base uses, and for which clean paper would be preferable, depends upon its contents. If these are worthless, so also is the newspaper, no matter how much labor may be expended on the material operations necessary to produce it. Obviously the asserter of this doctrine would be more productively employed in making printer's ink or setting type than in racking his brains to invent or maintain some theory intended to vest the hired laborer with an exclusive right to the whole product; for, by his own theory, he produces no goods nor anything of value.

It is said by J. S. Mill (B. 2, Chap. 15): "The reason why capital yields a profit is because food, clothing, materials, and tools last longer than the time required to produce them; so that if a cap-

italist supplies a party of laborers with these things on condition of receiving all they produce, they will, in addition to reproducing their own necessaries and instruments, have a portion of their time remaining to work for the capitalist. Thus we see that profit arises, not from the incident of exchange, but from the productive power of labor, and the general profit of the country is what the productive power of labor makes it, whether any exchange takes place or not."

This seems to be an artful statement of the doctrine more fully elaborated by the socialist (Marx), to wit, the laborers work a portion of their time to make a profit for the capitalist. Profit is a deduction from or a share in the product of their labor. From which it follows that if any party of laborers fail to produce a profit, it is solely because they do not work long enough; their labor day is too short. Neither profit or loss is at all due to the "inspection and direction" of the capitalist, for he is supposed to do nothing except to furnish the capital. Production is not carried on in that way. The capitalist supplies himself with the necessary means and instruments, and hires laborers to do as he and his foreman direct. For their work he pays them wages, and if the exchange value of his product exceeds his outlays he makes a profit, otherwise not. If he makes a profit, he is said by the socialist "to exploit" his laborers. If he makes a loss, he may be said to "exploit" himself.

A party of laborers without a manager would be like an army without a general, a mere mob, fit only to tread on each other's heels. Until laborers can make voluntary coöperation a success, their proper course is to deposit their savings in banks, to be loaned out at interest to their employers, or used as a fighting fund to maintain strikes for higher wages. When coercive coöperation or socialism is adopted, the managers of the scheme must determine beforehand what things shall be produced, how much of each, in what manner, by whom, and by the proper subalterns see that every man performs his allotted task, for otherwise the molecules of the social organism would suffer from inanition. The laborers will allow something as a deduction from the product of their labor to their managers and overseers on the score of equality and fraternity, for they do no labor, properly so called. The brain of this social octopus will be a parasite feeding upon what is gathered by its legs and arms.

Also exchange value has something to do with the existence and amount of profit. For if anything is produced for which there is no adequate demand, because there is already an overstock, or because it is not wanted, there is little hope of profit, however productive of quantity the labor bestowed upon it may be. Laborers operating a knitting mill would produce stockings of some sort. Their product, however great, could not

reproduce their necessaries and instruments with or without a profit, except by way of exchange, and not then unless the exchange value of the product was sufficient for the purpose. If the product remained unsold, or was unsalable, the laborers could not reproduce even their victuals, although they worked night and day.

The quantity of products is not increased by exchanging them, nor by transporting them from where they are not to where they are wanted, but their value is. If either party to an exchange gained nothing by it, there would be no motive on his part for making it. If wheat had no greater exchange value abroad than at home there would be no motive for its exportation. A product in excess of what its producer can use or consume himself is worthless to him except for the purpose of exchange, and its value to him is in proportion to its purchasing power. If surplus products remained in the hands of their producers, manufacturers would starve, while farmers would go naked. Without exchanges, surplus products might be called potential wealth—until they rotted. But as actual wealth they are measured by their value, which is greatest when they have reached the hands of those who want them the most, to wit, their consumers, although after their consumption nothing is left of them except the benefit they have conferred in the satisfaction of wants.

8. CAPITAL AND INTEREST.

Since more goods can be produced by the aid of capital than without it, even if their ratio of exchange remain the same when produced in such vast quantities by machinery, more or less automatic, as when everything was hand-made, there are more things to consume and exchange than before, and therefore the aggregate exchange value of each of them has manifestly increased. The intelligent socialist loves capital so much that he wants to acquire it, not by the exercise of industry and frugality, but by confiscation. He wants to stand in the shoes of the capitalist, and enjoy the use and benefit of his capital. Not that he really thinks that a party of laborers, without a competent manager, if supplied with food, clothing, materials, and tools, will reproduce their necessaries and instruments and still have a portion of their time left to work for the capitalist, but because the managers who will do the head-work and will possess and control everything, will have him among their number, perhaps as their chief. To furnish a pretext for the confiscation of capital, it is asserted that hired laborers, after reproducing their necessaries and instruments, work an additional period of time to make a profit for the capitalist, which profit is surplus labor value extracted by him out of them, and which continually adds to and causes the growth of capital. But since no one could or can hire

laborers unless he had or has acquired capital, it is necessary to attack its original acquisition. It was said by the socialist (Marx): "At the dawn of capitalist production—and every capitalist upstart must go through the historical stage—avarice and the desire to be rich were the ruling passions." The socialist wants to confiscate capital in order to punish greed; the frugality and abstinence necessary to maintain it afterwards to be endured and suffered as a national calamity by the body politic as a social organism. In this country the origin of capital is not lost in the mists of antiquity. Poverty migrated and migrates here, not wealth. In a wide continent, where all had equal opportunities, those who were diligent and frugal acquired wealth, more or less, depending upon their abilities and good fortune. And such is still the case; a large part of the continent still remains unsettled, while land in many of the oldest States can be acquired at a nominal price. In fact the industrious and frugal man makes savings everywhere, although in some countries he must conceal his treasure to prevent its confiscation by the public or private robber. Doctor Franklin saved money while working for wages as a printer in London; he drank water while his co-workers drank beer. Poor Richard said: "Without economy no revenue is sufficient." Savings enable a laborer to acquire implements, a stock in trade, or land and cattle. After he has acquired sufficient to be his own employer, he is a

capitalist. The hired laborer who is diligent, temperate, frugal, and honest, is an incipient capitalist; he belongs to the class of men which furnishes the millionaires. Those who regard industry and frugality as great sacrifices and spend all they might save on drink and other extravagance belong to the class which furnishes the paupers.

The capitalist upstart usually begins by working for hire; he is diligent, frugal, able, and honest; he makes himself more and more useful to his employer, gets higher and higher wages, until he is taken in as a partner or starts in business for himself. Numerous instances might be cited from the most eminent concerns in Chicago, whose members began as hired men. When a successful house ceases to be composed of upstarts, it becomes infected by dry rot and prosperity forsakes it.

When the upstart has proved himself to be trustworthy he can command loan capital or the savings of others. Having ability, honesty, frugality, industry, and fortitude, others are ready to bet that he will pay his debts; although calamity may possibly overtake him, they believe he will do to trust. About his premises there is vigilance and efficiency; his methods, implements, materials, and employes are of the best; he is a good buyer and a good seller, or employs those who are; his outlays are a minimum, his product a maximum and suited to the market. Loiterers, incapables, and high livers can not with-

stand his competition ; it is ruinous to them ; he supplies consumers with what they want at too cheap a rate.

When the upstart has achieved great success everybody wants to share profits with him, and think that he ought to pay the taxes, support the poor, and cry over the prodigal, the loafer, and the tramp. Social agitators denounce him, urge his employes to strike for higher wages, and are ready to confiscate his property or to destroy it, and to do him personal violence. He has bought and sold at the market price and become rich, while others who did the same have consumed or lost their capital and become poor, or never acquired any and remained poor. He has practiced legerdemain ; he possesses the art of extracting surplus value out of the labor of his hired men, while others, who paid the same wages, possess the art of having surplus value extracted out of them ; others, the art of not extracting any surplus value out of their own labor, or of spending it if they do ; and still others of doing no more labor than necessity compels them to do.

The rich Rockefeller, in 1864, was working for hire as a clerk ; his partner, Andrews, was, or had been, a hired laborer in an oil refinery, when by some mental labor he devised a method whereby more kerosene could be obtained from petroleum than by any method then known. With the aid of borrowed capital his process was tried and proved to be a success. At that time the residue

was waste or used for fuel, but afterward was converted into paraffine, lubricating oil, aniline dyes, etc. Tanks were constructed to save the petroleum from running to waste; also pipe lines to convey it from the well to the seaboard, the lakes, and elsewhere; also numerous other economies were used in the production, transportation, and sale of the crude oil and its products, whereby the quantity of labor per unit of product has been reduced to a minimum, with the result that kerosene is sold at retail for a few cents a gallon. If the members of the Standard Oil Company have extracted their vast wealth out of their hired men, each of them must have been a spouting well of richness.

But in Texas, where none of the members of the company reside or carry on business, it is thought that this great wealth has been extracted out of the consumer, and they have been indicted there for feloniously conspiring to keep up the price of kerosene above what it might be sold for. The Texas consumer considers himself defrauded, although he prefers kerosene at its price to cotton-seed oil, lard oil, whale oil, tallow, or any other illuminant, and can buy petroleum at its market price and make his own kerosene, naphtha, benzine, gasoline, paraffine, lubricating oil, aniline dyes, etc., if he chooses to do so. Texas being an agricultural State, the provisions of its anti-trust law do not apply to the producers of agricultural products and live stock. Any com-

bination or conspiracy among them and other like producers elsewhere which would raise the price of cotton, cotton seed, or steers would be hailed there with delight.

The possession of property implies that its owner has practiced frugality, for those who consume or squander all they acquire can not remain or become a capitalist. Any one who makes savings and hides them away gets no profit out of them; the reward for his abstinence is the provision which he has made against sickness, old age, or any future need. Capital, which in fact is money, or money's worth, has the same purchasing power and will draw the same rate of interest, whether its acquisition caused or the abstinence from consuming it causes pleasure or pain. Hired labor gets the same wages whether the laborer who performs it loves labor or hates it. If any one is so constituted that industry and frugality, or either of them, cause him great pain, perhaps those who practice those virtues as their free choice and delight ought to share with him.

An owner of capital can demand a profit for its use. As an excuse for doing so, he might say that a loan involves trouble in the lending and securing its return; if it be of a specific article, there is also its injury from wear, misuse, and accident; if the thing is consumable, there is also the trouble of identifying the thing returned as an equivalent to the thing lent; if money is lent, that offered in payment may consist of light,

debased, or counterfeit coin or depreciated paper money; a loan without interest is a mere gratuity.

Although the lender demands interest, why does the borrower agree to pay it? Some who borrow can not repay the loan without interest; their proper vocation is to work for wages, or at least not to borrow. Many farmers mortgage their farms and with the assistance of their families spend and fool away the money, and thus often lose their farms. But those who possess the requisite abilities make a profit out of borrowed money in excess of interest, some of them great sums. Profit is made in trade, by buying at one price and selling for more, or by selling short and afterward buying back at a lower price. The market price of commodities, including all kinds of negotiable securities, continually vary. A producer is a buyer of materials, instruments, etc., and a seller of products. The price of cotton varies much during a year; its price was a third higher, on an average, in 1895 than in 1894. Profit is made by paying interest for money on call; banks do so continually. Present purchasing power is of greater value than the same amount certain to accrue in the future to any one who can make a profit by means of it in the meantime; also, to any one who is without the means to satisfy his present needs. A nation engaged or about to engage in war, or has suffered defeat, may be included in this category.

Money tied up in a bag will not beget money; neither will wheat in a granary beget wheat, although it may become wormy, grow musty, or sprout. Locomotives, cars, wagons, ships, and other useful instruments will beget nothing except loss if allowed to stand idle. Money is a productive instrument; if employed it can beget either a profit or a loss; it can enable its owner or borrower to carry coals to Newcastle, to sow seed in barren ground, or to produce something which is not wanted or not in demand at an adequate price. No useful instrument is productive of profit unless it is intelligently employed. Ships, etc., can convey goods from where they are a superfluity to a place where they are wanted. At Venice, when Antonio's argosies "richly laden came to harbor suddenly," there were more ducats in the cargoes than he had expended on them. The three thousand ducats enabled Bassanio to win the rich heiress, and were more productive to him than ewes and rams.

A hired man said that he could not see why anybody should make a profit out of the product of his labor. In the first place, such product was not of his designing but of his employer, and was worthless if not wanted, and if wanted had the greatest value where it was wanted the most, which might be at Venice, the East Indies, or elsewhere. Who was to find the best customer and sell it to him? It was good sense for the workman to stick to his job, take his reward in

money, and leave to his employer the risk of profit or loss and of finding the best customer for the product, the nature of which was determined not by the workman, but by his employer.

Great efforts have been made to befog the subject of interest. For example, this language is quoted: It is often said that capital is productive, and so calls for interest. Obviously capital is productive in the sense that production is greater with than without capital; but does that explain interest? Why should any one care for a plow, which one can not eat, wear, or play with? The reason is clear; because it produces things which we can eat, etc. Their value gives value to the plow. Thus we have the principle that the value of capital is a reflected value; that is, the value of the means of production is derived from the product. But how much value will the plow have? Suppose it lasts ten years and with it are produced crops worth \$1,000. Paying all the rent, wages, etc., \$50 is left at the end of ten years. Now men learn to foretell these results very closely, and from their estimate of what a machine will produce they determine its value. If it will produce a great deal they value it highly; if only a little, they will only give a little for it, no matter how much or little it cost to produce it. So it does not do to say that capital draws interest because it produces more than its own value, for, as we have seen, it is valued according to what it produces. ("Outlines of Economics," Ely, p. 212.)

The market value of the plow is no more than sufficient to induce its maker, competing with other plowmakers, to produce it for sale. Any more plows than he can use himself are worthless to him except for the purpose of sale. A plow would have no other than its market value to a person who had no use for it except to sell, nor to any one who had no other means to satisfy his immediate and pressing needs. The value of the plow is fixed by its cost of production as above. Although a farmer had means sufficient to satisfy his wants until the productive power of the plow became available, he ought not to borrow its price, with or without interest, unless its product in ten years, or during the life of the plow, would more than repay the debt. No one ought to buy the plow at any price unless he could gain by it.

An argument against interest might be made as follows: Obviously a capitalist has a surplus in excess of his current needs; therefore the same amount in the future is worth more to him than his present surplus. A loan of it on good security, without interest, would secure him from loss by accident, theft, robbery, and deterioration from lapse of time, and relieve him from all expense, care, and trouble of keeping it. In fact he would gain or save so much by lending his surplus in that way until it was needed to satisfy his wants, that he ought to pay the borrower for his trouble. Money is often deposited in bank without

interest; also put with other valuables in a safety deposit vault and money paid for their safe keeping.

9. NECESSARY VALUE.

It is said (J. S. Mill, B. 3, Chap. 3): When the production of a commodity is the effect of labor and expenditure there is a minimum value which is the essential condition of its being permanently produced, i. e., its market value must be sufficient to repay the cost of production, and to afford besides the ordinary expectations of profit. The cost of production, together with the ordinary profit, may therefore be called the necessary price, or value, of all things made by labor and capital; that when the commodity can be made by labor and capital in indefinite quantity, this necessary value is also the maximum which its producers can expect, if competition is free and active, for a higher rate of profit would stimulate its production, capital would rush in to share in this extra gain, and by increasing the supply of the article reduce its value; that as a general rule things tend to exchange for one another at such values as will enable each producer to be repaid the cost of production with the ordinary profit; in other words, such as will give to all producers the same rate of profit on their outlay. But in order that the profit may be equal where the outlay—that is, the cost of production—is equal, things must on the average exchange for each other in the ratio

of the cost of their production; things of which the cost of production is the same must be of the same value. For only thus will an equal outlay yield an equal return.

According to this statement, in Eq. (1), c =a unit of outlay; $x.c$ =total outlay per unit of commodity "a"; $y.c$ =total outlay per unit of commodity "b." Also,

r =the ordinary rate of profit on outlay,

$r.x.c$ =profit per unit of "a,"

$r.y.c$ = " " " " "b,"

$x.c(1+r)$ =necessary value of "a" per unit,

$y.c(1+r)$ = " " " " "b" " "

If m units of "a" have the same market value as n units of "b," then, at their "natural" value, $m.x.c(1+r)=n.y.c(1+r)$. (6)

Things of which the cost of production is the same must be of the same value, and all producers make the same rate of profit on their outlay, to wit, the ordinary profit.

But the author cited also says (J. S. Mill, B. 3, Chap. 6): "Every commodity of which the supply can be indefinitely increased by labor and capital, exchanges for other things proportionally to the cost necessary for producing and bringing to market the most costly portion of the supply required. The natural value is synonymous with the cost value, and the cost value of a thing means the cost value of the most costly portion of it."

Therefore the producers of the less costly portions of the supply required make a greater rate

of profit on their outlay than those who produce the most costly portion, and hence, "as a general rule things do not even tend to exchange for each other at such values as will give to all producers the same rate of profit on their outlay." And in order that the producers of the most costly portions of the supply required of various commodities may be satisfied with the same rate of profit on their outlay, the production of them must be equally attractive; it being said by the author cited that the production of gunpowder would require a greater rate of profit than things which were not explosive.

The producers of the most costly portions of the supply required, and who stand at or just within the margin of production, are not in a very good condition to rush into some other business, "and by increasing its supply reduce its value."

The proportionality of value to cost above mentioned results in Eq. (6). For if m units of commodity "a" exchange for n units of commodity "b," then one unit of "a" buys $\frac{n}{m}$ units of "b," and $\frac{n}{m}$ expresses the value of "a" relative to "b," the value of which relative to itself is unity. Hence, if the market value of "a" and "b" is natural as between them, then, according to the author cited,

$$\frac{n}{m} : 1 :: x.c(1+r) : y.c(1+r) \quad (7)$$

r being the rate of profit made by all their producers, according to one of his statements, or

the rate of profit made by the producers of the most costly portion of the supply required of each, according to his other statement.

A treatise on economics, not purely speculative, ought to furnish a list or table of the necessary value (or price) of each commodity. The rising generation, having learned (J. S. Mill, B. 2, Chap. 15) that after making good the outlay there commonly remains a surplus or profit, the net income from the capital invested, would all be anxious to know the amount of the "ordinary profit" which he could spend on necessaries or pleasures, or by saving add to his wealth. Public officers and others who let contracts ought to know what is the necessary value of the thing or things contracted for; so, also, those who bid for the job, or propose to produce anything for sale or exchange. Unless the "ordinary profit" is generally known, capital and competitors might rush in for an extra profit, when they ought to stay out and avoid a loss.

The list would, however, be limited to those things which are uniform in kind and quantity, and which are continuously produced for the purpose of sale or exchange, for only such would have a quitable market value.

All products of a joint cost would be excluded (J. S. Mill, B. 3, Chap. 16), for the cost of each would be unknown; as, for example, coke, coal gas, coal tar; chickens and eggs; calves and dairy produce; beef, hides, tallow, horns, hair, bones;

mutton, mutton tallow, wool, sheepskins; cotton, cotton seed; grain and straw—all joint products of the same process of reduction, distillation, manufacture, the same course of husbandry, or of any occupation or industry whose reward is derived from more than one specific commodity. A maker of cotton stockings does not make them all of the same quality of cotton, nor all equally fine, nor all of the same size and pattern. He endeavors to conform his product to the current demand for it; and if some kinds and styles prove to be in such demand as to more than compensate for the loss on those which are not in adequate demand, he feels encouraged to continue the business. A farmer produces various things, as grain, hay, roots, live stock, etc.; he will sow grain partly for the straw, and partly in order to seed down the land to grass; rotation of crops is good husbandry. A shoemaker uses various kinds and qualities of leather and other materials, and makes shoes of various sizes, kinds, and qualities. A producer follows an occupation, very few of which are such that the product is some one thing of a uniform kind and quality. And it is the total result of his operations during a period of time sufficient, in his opinion, to determine the question which induces him to continue or to abandon his occupation. It is the total profit, actual or expected, which determines for each competitor the direction of his competition. Large profits are often made by taking a very small rate of profit per

unit of outlay, as by turning over capital often during the period for which profit is computed, or, as it is said, by quick returns and small profits.

The author cited also says (J. S. Mill, B. 3, Chap. 3): "Adam Smith and Ricardo have called that value of a thing which is proportional to the cost of its production its natural value (or natural price). They meant by this the point about which the value oscillates, and to which it always tends to return; the center value toward which, as Adam Smith expressed it, the market value of a thing is constantly gravitating; and any deviation from which is but a temporary irregularity, which, the moment it exists, sets forces in motion tending to correct it. On an average of years, sufficient to enable the oscillations on one side of the central line to be compensated by those on the other, the market value agrees with the natural value. The sea everywhere tends to a level, but it never is at an exact level; its surface is always ruffled by waves, and often agitated by storms. It is enough that no point, at least in the open sea, is permanently higher than another. Each place is alternately elevated and depressed, but the ocean preserves its level."

Instead of preserving its level the ocean continues to oscillate. The earth's gravity tends one way; its centrifugal force and the attraction of the sun and moon another. Heat and cold cause vast currents to flow to and from the poles, which

are turned aside by obstructions and the forces which operate upon the water; the pressure of the air does not remain uniform everywhere, and the shifting winds not only ruffle the surface of the water, but disturb its level. It would have been more accurate to say that the oscillations of the water occur within certain variable limits at which the various forces counteract each other. In order that the ocean may be level, no part or parts of it must be higher than others; so also as to natural value, which, in order to be natural, must be so as to all commodities at the same time.

Although the oscillations in market value may compensate for one another on an average of years, as above stated, that fact does not help those who are engaged in or who begin business when the oscillation is going the wrong way for them. The "ordinary profit" on the most costly portion of the supply required of the various commodities is not so great as to enable them to keep their heads above water until it sets the other way. During the lapse of years many producers of the most and of the less costly parts of the several supplies will die, alter their business, or step out of the competition, and newcomers will take part in it; the relative demand will vary, and also the conditions of production. A compensation which occurs only in an average of years can help those only who are long-lived and long-winded. In relative value, while one or more

things are going down, another or others are going up; hence it would add greatly to the practical value of this central line if it were located so that everyone, and especially every new beginner, might enter into the swim at the right place or at the right time.

The theory of natural value, above considered, ignores human inequality and assumes that all products are uniform in quality. All the hunters, fishermen, and other producers are all exactly alike; so also are all the deer, beaver, fish, and other products. With equal facilities all producers can produce the same thing at the same cost and make the same profit. The theory does not apply to a state of industrial freedom and of free competition among unequals.

It is only in socialism that every person will produce and procure the same thing at the same cost. In that Utopia all men will be considered to be exactly alike; no kind of labor will be considered more arduous or disagreeable to one person than to another. Every unit of labor time will draw from the common stock the same quantity of commodity, which will be uniform in quality, or so considered, and none of it be stale, musty, mildewed, worm-eaten, inferior, or unequal in any respect. All the beef will be from cattle that are all equally young, healthy, and fat, and be all tenderloin and fine cuts; all the honey in the hive will be of new white comb, and none of it will be old, webbed over by the moth, or partly

occupied by young bees. Everything will be delivered over to consumers at the same price per unit of quantity, and none of it offered to the highest bidder and sold according to its quality.

It has been said (Cairnes) that the normal or natural value of a commodity is that which will suffice, and no more than suffice, to yield its producers what is considered to be the average or usual remuneration for such sacrifices as they undergo. But, under free competition, every competitor does the considering for himself ; and the value of his product for a period by him deemed sufficient for the purpose must yield him at least as good a reward as, in his opinion, he can otherwise obtain, or else he will change his occupation, whether his remuneration is above or below the average.

When every competitor has no cause to change his occupation, it may be said that competition has, at least theoretically, ceased to operate and the relative value of commodities are in equilibrium, although all producers were making a different rate of profit on their outlay.

VII.

MONEY VALUE.

The money value of a thing is its relative value as compared with money, and in amount is expressed by the number of units contained in

the sum of money which it is deemed worth or for which it is sold. The exchange value of the money unit is the unit of money value. All of the units being alike, are of the same value; for if not alike they can not be added together into an aggregate; but being so, there are as many units of money value in a sum of money as there are money units. Thereupon, sums of money and amounts of money value can be stated in figures and become amenable to the rules of arithmetic. Accounts can be kept in terms of the money unit; all taxes, dues, debts, damages, cost, and value can be so stated. Market prices of all commodities, being of the same nature, can be compared with each other, and the relative value of commodities thereby ascertained; in fact, their relative market value is not otherwise ascertainable.

Barter is the direct exchange of commodities between their respective owners. In barter each party must have something which the other wants more than what he then has, and the commodities must be divisible so as to form a basis of exchange which will be satisfactory to both parties. But ordinary commodities are bulky, more or less perishable, and usually suitable only for some particular purpose, are consumed by their use, and have no general purchasing power. The number of ratios arising from the direct exchange of 100 commodities is 4,950; of 200 commodities is 19,900, supposing each of them to be exchanged

for each of the others and always at the same ratio. But they would not always exchange at the same ratio, and many of them would rarely, if ever, directly exchange for each other, as feathers for railroad iron, or axle grease for millinery. Value would not be easy to state in accounts; also debts and credits, if they existed. A theory of exchange value founded on barter, which assumes that every commodity is uniform in quality, durable, and has a general purchasing power, is based on a fiction. Where division of labor exists, and every producer relies upon his product as a means to acquire from others many of those things which he needs, no one could obtain them by barter, in kind, quantity, when wanted, and on terms which would enable him to pursue his occupation successfully; too much of his time would be occupied in truck and trade; those who want his product are seldom those who can supply him with what he requires. A baker needs from time to time a certain quantity of flour of a suitable quality; those who want some bread at stated intervals can not supply him with flour. A miller wants grain, but the farmer wants other things besides bread or flour for his surplus crop. What everyone wants in exchange for his superfluities is general purchasing power in a concrete, durable, portable, and divisible form, which he can from time to time, and at any time, use to acquire by purchase whatever he may need or desire; he also wants to sell at the highest

price obtainable and buy at the lowest ; as a seller he wants competition among buyers ; and, as a buyer, competition among sellers. In fact, the relative value of commodities is properly fixed by competition in their sale as well as in their production.

Money enables everyone to sell his superfluities to those who want them the most, and to acquire his necessaries from those who want them the least ; to do this, he sells to one person or set of persons, and buys of another.

During the fiscal year ending June 30, 1889, about one-half, in money value, of the exports from this country went to Great Britain, while only about one-quarter of the imports came from there. The exports to and imports from the following countries were, in money value, as follows :

	Exports.	Imports.
Brazil.....	\$ 9,351,081	\$60,403,804
Cuba	11,691,311	52,130,623
China.....	2,791,128	17,028,412
Philippine Islands	179,647	10,593,172

The exports were sold where they would bring the best price, and the imports were bought where they could be obtained at the lowest price. How this could be done by way of barter, and how international balances could be stated and paid by the use of that method of exchange, is hardly worth while to consider. Even if the money of a

country consists of an irredeemable and fluctuating paper currency, trade is not carried on with it by way of barter.

An exporter is one person and an importer is usually another; the former may sell on one side of the globe, and the latter buy on the opposite side; each of them buys and sells for money, unless in dealing with savages. A merchant continually buys of one set of persons and sells to another. A producer buys his materials and implements from sundry persons and sells his product to others. A farmer sells his surplus grain, live stock, and other produce to various persons, buys his dry goods, groceries, and other necessaries of others, pays his taxes, his doctor, lawyer, clergyman, the schoolmaster, etc., and, if thrifty, has some money left, which he may not use or spend for years. He would be no wiser if he were informed that his transactions really amounted to barter. A person can sell more goods, in value, than he buys; but he can not continue to buy more than his means will purchase. The people of Great Britain, having large investments in their colonies, India, and elsewhere, are enabled to buy continually more than they sell. The annual income from British capital invested abroad is said to exceed eighty-five millions of pounds sterling ("The Growth of Capital," Giffen).

In that rude state of society to which barter properly belongs, some commodity was usually

found to have a more general purchasing power than any other, whereupon it came to be used as a crude and imperfect money. Many things have been so used at different times and places, among others, cattle, sheep, grain, skins, and furs. But cattle and sheep may be large or small, young or old, fat or lean, sound or unsound ; grain, skins, and furs also vary in quality. Money ought not to require to be fed, watered, and perhaps doctored, or be liable to die, decay, become musty, or infected with weevil, moth, and vermin. No commodity is suitable for the purpose unless it is uniform in quality, durable, portable, divisible into parts without injury, limited in quantity and always in general demand.

When the metals became known, they were used for the purpose, and finally the precious metals were preferred to anything else. After they became known and available for the purpose, the owners of superfluous commodities, which are usually bulky, perishable, expensive to keep and carry, preferred to sell hem for precious metal, feeling sure that it would remain sound and in general demand until they severally saw fit to dispose of it from time to time as their needs might require. By so doing they acquired and still acquire a store of wealth in a concentrated, durable, and divisible form, with a great saving in value and in cost to them. Such money has a general purchasing power, present and prospective. The money of international trade is prec-

ious metal treated as bullion, estimated according to its weight and fineness.

Coinage fits the metal for use as money, and is done by the State according to a money system with which its people are familiar. The metal is reduced to a uniform fineness called standard, as, for example, nine-tenths pure metal and one-tenth of a prescribed alloy. This obviates all questions as to its fineness, and makes equal quantities of it by weight of equal value. A fixed quantity of it by weight is taken as the money unit, to which a name is given, as a dollar, a sovereign, a mark, a franc, etc. Thereupon the standard bullion is coined into multiples and submultiples of the money unit, each of a weight proportionate to its nominal value in the money system to which it belongs. This being done, any sum of money stated in terms of such unit contains a quantity of the metal in proportion to the number of money units contained in such sum, and with the requisite number of pieces, or coins, any such sum can be counted out in them without any division of metal or further ascertainment of its weight and fineness, assuming them to be genuine, undebased, and unimpaired by use or fraud. If coinage is free and gratuitous, the coins, executed as above, and therefore called standard coins, are merely the standard metal put into a form most suitable and convenient for use as money, and their exchange value conforms to that of the same weight of standard bullion.

Each of the precious metals is uniform in quality and makes a homogeneous currency; each of its units are alike and of the same value, and therefore a sum of money can be stated in terms of the money unit. But bimetallism, or the free and gratuitous coinage of both metals at a fixed ratio between them, to wit, that the silver coins, per money unit, shall be in pure silver a specific number of times heavier than the gold coins are in pure gold, fails to make a homogeneous currency; for the relative market value of the two metals will not remain the same as their coinage ratio, and the difference in bulk and weight of the two kinds of coin prevent them from being equally desirable in all sums.

If a money coined out of either metal remains unaltered in fineness and its unit unaltered in weight, every person who buys or sells, borrows or lends, in terms of such unit, knows what is to be paid or received just the same as in a contract to deliver or receive a specific amount of any other commodity of a uniform quality. A superstructure of credit can be erected upon such a solid foundation, for everyone knows what is meant by a sum of money stated in money units. What the exchange value, or, in other words, the general purchasing power, of a sum of money, or of a certain quantity of any other commodity, may be in the future, no one can foretell; as to that, everyone must take the risk. Prices and the relative value of commodities can not be fixed by

law so as to suit both the buyer and the seller, the producer and the consumer. The demand relative to the supply of anything does not remain constant, nor does its cost of production or acquisition. But with a metallic currency as above supposed, the money and relative value of commodities would conform to the varying relative demand for them at the varying relative cost of their production.

The relative value of the two metals has varied one-half since 1873, to wit: An ounce of fine gold had the same exchange value as 15.92 ounces of fine silver in 1873, and of about double that quantity in 1897.

The annual supply of both metals has been large and increasing for a number of years (Report of the Director of the Mint for 1896, p. 232), which proves that each of them is produced at a profit sufficient to induce and encourage its production.

The change in their relative value has been quite gradual since 1873, and affords no sufficient reason why a country which then had, and still has, either a gold or a silver standard should now alter it; for the relative value of commodities under either standard conforms to the variation in their relative cost of production or acquisition. Gold is greatly superior to silver as a metal, and has been preferred more and more for use as money ever since 1873. Silver has also been greatly supplanted in the industrial arts by elec-

troplate, German silver, and other alloys of the baser metals.

If bimetallism were beneficial its adoption at the existing commercial ratio would cause the least disturbance to prices and values. The adoption of the free coinage of gold at the ratio of $15\frac{1}{2}$ or 16 to 1 by a silver standard country would be nugatory; its adoption by a gold standard country would debase its unit of cost and value to the bullion value of the silver contained in its money unit. But its general adoption by all or the principal gold standard countries, if made effectual, it is insisted, would cause the relative value of the two metals to conform to their coinage ratio by making the relative demand for them conform to that ratio. The scheme has for its object to raise the exchange value of silver and depress that of gold; to stimulate the production of the former and discourage the production of the latter. The silver producers are its chief advocates, aided and assisted by debtors and speculators in gold standard countries who expect to gain by an upheaval and alteration in values, caused by making money more abundant and of less value per unit. Some countries which hold a large stock of silver, coined formerly at the ratio of $15\frac{1}{2}$ or 16 to 1, being somewhat in the condition of the fox in the fable who had lost his tail, are inclined to regard the above scheme with an eye of favor.

Metallic Tokens. Some of the coins, as for the fractional parts of the money unit, if made of the

standard metal, would be too small for convenient use, and are usually made of baser metal, with a nominal or money value assigned to them greater than their metallic value. Such coins are necessary in retail trade and to pay the fractional parts of the money unit. A newspaper could not be bought for a cent if there were no cents. These coins are called tokens. Their coinage is limited to the amount required, is done on Government account, and their legal tender power is limited to a small sum in any one payment. Such coins are necessary for change, but they become a nuisance when they are in excess of the amount required, wherefore they are made redeemable at the Treasury, and when wanted are obtainable there for other money.

Paper Tokens. Paper money is token or representative money, and properly consists of promises to pay money to the bearer on demand, executed on paper in such form and in such amounts as to be suitable for general circulation as a substitute or token for the money thereby promised to be paid. This token takes the place of the coin which it represents, and thereby reduces to the extent of its nominal value the amount of coin which would otherwise be current.

The legitimate demand for paper money is not a demand for more money, but for that kind because of its superiority over coin for common use in active circulation. Standard coin is subject to the objections of bulk, weight, and wear.

Paper money is light, easy to count, carry and conceal about the person, and always requires for its redemption coin of full weight.

The power to coin money, to alter, debase, and dilute it, is an attribute of sovereignty, to be exercised solely for the public good, and not for private gain. Hence the State ought to furnish all the money. Any gain, saving, or profit arising from the manufacture and issue of metallic and paper tokens belongs exclusively to the people as represented by the State. No person or corporation should be authorized or permitted to make and put in circulation any kind of money. Banks of issue and bogus mints ought to be alike prohibited.

The fineness of the standard metal, the weight of the standard coins, and even of the metallic tokens, are fixed with great precision, and abundant provision is made for the execution of the coinage conformable thereto; also, the coinage of the standard metal is made free and gratuitous in order that the standard coins shall have the same exchange value, per unit of weight, as the uncoined metal. Thereupon the money and its value are as stable and as elastic as the metal and its value, and all attempts to make the former more so violate the theory of free coinage and nullify its object.

Metallic and paper tokens issued solely for the purpose of obviating the practical objections to the exclusive use of the standard metal, and made always redeemable at the National Treasury and

its offices, would not alter the nature of the currency, and would leave its value per unit, the same as if it were exclusively of standard coin.

The Currency Volume. The amount of money needed for active circulation depends upon the quantity of business to be transacted and the manner of doing it. A commercial community would require more money for this purpose, per unit of population, than if it were agricultural. Also, when transactions of any magnitude are chiefly effected by checks and other ordinary instruments of credit, the quantity of money required is much less than if it were counted out, examined, and paid over in every transaction.

But money is not wanted merely for immediate but also for future use, more or less remote. The money held in reserve for future use is as much a part of the currency as that which is paid away as soon as it is received. For savings, reserves and future use, gold coin is preferred. Such money encourages frugality and promotes the growth of capital; war, civil commotion, or financial panic does not destroy its value. The financial condition of a country is strong when it is saturated with specie. Then the exportation of a few millions would excite no fear about the stability of the currency, such as continually arises when it consists chiefly of paper money and other tokens. The people of France paid a thousand millions of dollars to Germany, when overrun by its armies, without a financial collapse.

The nominal amount of a metallic currency also depends on the kind of metal used and the weight of the money unit. For example, if the weight of the money unit were reduced one-half, the nominal amount of the currency would be doubled.

A metallic currency whose standard coin and money unit remain unaltered in weight and fineness, is automatic in its volume. As prices rise the exchange value of money falls, and exportation of it occurs when it can be done at a profit. As prices fall, the exchange value of money rises, and coin previously exported is imported, or bullion is procured and coined when it can be done at a profit. Precious metal, in coin or bullion, like any other commodity, is exported when in superfluity and procured in the opposite case.

If, instead of allowing a metallic currency to correct itself automatically, money is kept too abundant by issues of paper money, the final result is the total expulsion of the standard coin; after which the paper money, being non-exportable and irredeemable, declines in value as its quantity increases, until its value becomes nominal, as Continental money, assignats, Confederate money.

A gold currency may also be debased by the free and gratuitous coinage of silver at a nominal or legal-tender value in excess of its bullion value, or gold price. In such case, silver bullion can be coined at a profit until the abundance of money and the consequen rise in prices cause

the silver coins to fall to their bullion value. Prior to which time the gold coins, being worth more as bullion than their nominal or money value, are exported or otherwise disappear from circulation. After the silver coins fall to their value for export as bullion, the currency could not be further inflated except by debasing them, or by issues of paper money as above stated.

According to the report of the Director of the Mint for 1896, p. 226, the gold produced in the United States previous to 1896 amounted, in coining value, to \$2,059,946,769; to which add his estimate for 1896, to wit, \$51,500,000, and the total product up to 1897 was \$2,111,446,769. Also, p. 281, the total gold coinage at the mints of the United States up to July 1, 1896, was \$1,814,692.253, which is greater than the total currency of the United States at that date, which, as given by the Treasury Department, was \$1,776,817,488, of which only \$567,931,823 was in gold coin, the residue consisting of various kinds of paper money and of silver tokens. The difference between the product and the coinage may be taken as equal to the quantity of gold used in the industrial arts, supposing all old material to be reëmployed for that purpose. It is obvious, therefore, that the entire currency might have been in gold coin, without importing any of that metal. In such case, the preference for paper money over coin for use in active circulation could have been satisfied by the issue from the

Treasury of gold certificates for a like amount in gold coin deposited and there held for their redemption. Thereupon the currency and its proportionate parts, as between coin and paper, would have been automatic. The annual domestic product, which is large and increasing, to wit, \$46,610,000 in 1895, and \$51,500,000 in 1896, after deducting the quantity of new gold required for use in the industrial arts, would have supplied any future increase in the currency demanded by an increase in the population or other cause.

But the currency of the United States consists of about one-third in standard gold coin and two-thirds in paper and other tokens. In addition to all the foreign gold imported, there was exported previous to July 1, 1896, about \$1,200,000,000 of the domestic product. The net export of the United States gold coin from January 1, 1870, to November 1, 1896, was \$576,494,360 (Mint report for 1896, p. 32). To this add the net export of foreign gold coin and of domestic and foreign bullion. The net export of gold for the fiscal year ending June 30, 1896, was \$78,904,612; for the fiscal year ending June 30, 1895, was \$30,117,376 (Ib.). Gold is exported persistently as above, because the volume of the currency has been in time past, and still is, kept stuffed with paper and other tokens. "When, during a period of apprehension, caused by a large efflux of gold from England to America, views were expressed in

Manchester and Liverpool that a much larger issue of bank notes ought to be permitted, this opinion tended manifestly to the depreciation of our currency." (Goshen's "Foreign Exchanges," p. 74.)

If the free coinage of silver were adopted at the ratio of 16 to 1, which is about twice its commercial value, all of the gold coin, and gold not used in the industrial arts, would be exported, except what might be hoarded. And thereupon the currency would become one consisting of silver dollars and paper tokens redeemable in silver dollars. Only about \$60,000,000 of silver dollars is all that can be kept in circulation in specie; any excess over this amount is returned to the Treasury and silver certificates taken out for it. After such a currency was inflated to the exporting point for the silver coin, and prices had become adjusted to the silver dollar as the money unit, and debts had been incurred on that basis, the chronic complaint about the scarcity of money would be heard, unless the exchange value of silver continued to decline, prices to rise, and debts to dwindle.

The State has power to alter the money and its unit, so that a sum of money payable, e. g., in dollars is payable in any kind of dollars which is a legal tender at the time of payment. In addition to the natural and unavoidable causes of variation in money value, everyone must take the additional risk of variation caused by an alter-

ation in the money. Such alterations may be justified by necessity or other reasons of State almost equally cogent.

Many people, who would be startled by legalized alterations in other commodities and their units of measure, think that alterations in money so as to make it more abundant and less valuable, is quite the correct thing to do; it helps the debtor and speculator and is said to give "a fillip" to business; it is always practicable, for creditors can be compelled to accept the inferior article and are then in no condition to cry stinking fish. To refuse the free and gratuitous coinage of silver dollars out of metal worth half their nominal and legal-tender value was said by the cheap-money candidate for the Presidency in 1896, to shut the gates of mercy on mankind. The gates could have been kept open quite as easily by debasing the gold coin one-half, and more easily by liberal issues of paper money, as desired by the Populists. But neither of these methods would have suited the silver producers or been supported by the votes of the silver States. To alter money and its value by debasing the coin, or by substituting a cheaper metal, is an antiquated method involving time and expense. The French *livre* was originally a pound of silver, but finally contained only about seventy grains troy, but it took a long time to do this. To inflate and depreciate a currency with paper money is more adroit, and can be done quickly and cheaply; paper money can

be produced at once to an unlimited amount at a merely nominal cost.

Alterations in money cause the standard of cost and value to become fallacious. The difference is not readily perceived by everybody; prices alter, but the cause is not referred to the alteration made in the money. During the war of secession, accounts were kept and prices stated in dollars as before, but they were paper dollars. During July, 1864, the value in paper dollars of a dollar in gold varied between the extreme limits of \$2.85 and \$2.22. After the war ended, as the quantity of paper money was reduced, it was said gold fell in price. The prices and relative value of commodities did not at once and uniformly respond to the change. Some things rose faster or sooner than others during the expansion, and some things fell sooner or faster than others during the contraction of the currency.

VIII.

AMERICAN CURRENCY.

A brief history of the money of this country furnishes a practical illustration of the subject of money and money value.

Colonial money was expressed in £. s. d., or pounds, shillings, and pence. But this is money in the abstract, ideal money, or, as it is called,

money of account. What, then, was this money in the concrete?

From the time of Queen Elizabeth until 1816, a pound troy of sterling silver (.925 fine) was coined into 62 shillings. Spain and her colonies being the chief source of silver, the Spanish dollar found its way into England and this country. This dollar, called the old Seville piece of eight, contained the same amount of pure silver as 4s. 6d. sterling. But in this country, as finally settled, this dollar in Colonial currency was 8s. in New York and North Carolina; 6s. in New England and Virginia; 7s. 6d. in New Jersey, Pennsylvania, Maryland, and Delaware; 5s. in Georgia. The colonists in their foreign trade acquired English, French, Spanish, Portuguese, and other gold and silver coins, which, taking their contents in pure metal and allowing the market ratio between gold and silver, could be valued in terms of Colonial money. Any colonist who sold Colonial produce abroad, bought foreign products, received or paid coin in his accounts, could state his transactions and his profit or loss in Colonial £. s. d. By making Colonial shillings smaller than English shillings the colonists gained nothing, for the prices of goods were raised to correspond. Nearly all the colonies issued paper money and made it a legal tender, with penalties for asking a higher price in paper than in hard money, with the result that £100 specie was the equivalent of £525 Massachusetts paper money in

1740, and of £1,100 in 1748. Adam Smith said, in commenting on Colonial money ("Wealth of Nations," B. 2, Chap. 2): "A positive law may render a shilling a legal tender for a guinea, because it may direct the courts of justice to discharge the debtor who made the tender. But no positive law can oblige a person to sell goods, and who is at liberty to sell or not to sell as he pleases, to accept of a shilling as an equivalent to a guinea in the price of them."

Continental Money. The colonies, afterward States, fought the mother country jointly and severally on credit; the people were opposed to taxation. The Continental Congress had no power, and the several States had no disposition, to tax. Congress and the States severally issued bills of credit to very large amounts. Continental money was expressed in Spanish dollars and ninetieths, a Pennsylvania penny being one-ninetieth of a dollar.

An account of this money is given in a report, April 18, 1781, by a committee appointed to estimate and state the amount of the debts of the United States, with the necessary estimates for the current year as near as could be done, the debts being stated in Continental money at \$230,000,000; also in specie, on the basis of 75 to 1, at \$3,066,666 $\frac{2}{3}$. One item of the total is \$160,000,000 of Continental money then supposed to be outstanding. They say: "It can not be forgotten that these United States were plunged into a war and that an army

was drawn together before any money was provided or funds established for defraying the expense thereof. In this situation of affairs Congress met in May, 1775. They had no resource from whence to derive present supplies but that of emitting bills of credit redeemable at a future day. On June 22, 1775, Congress agreed to emit two millions, which, on July 25th, was increased to three millions, for the redemption of which they pledged the confederated colonies; on November, 29, 1775, three millions more were authorized on the same security; on February 17, 1776, four millions more; on May 9, 1776, five millions more; on July 22, 1776, five millions more. But as it was foreseen that such repeated issues of bills of credit would increase the quantity to too great a degree, and consequently occasion their depreciation, it was resolved in October to borrow five millions, and in November a lottery was set on foot. As neither loans nor the lottery were sufficiently productive, necessity compelled further emissions of bills of credit. By this means the paper currency being multiplied began to depreciate. It was therefore resolved, September 10, 1777, to prepare an earnest recommendation to the States to proceed to taxation; also to borrow larger sums. Unfortunately the tax failed, and the sums obtained from loans were greatly inadequate to the expenditure; consequently more money was emitted, and, notwithstanding the favorable turn in our affairs in 1778, depreciation increased with

amazing rapidity. At the close of the year 1778 the sums emitted and borrowed amounted to about one hundred and eight millions. Congress, anxious to put a stop to any further emissions and to provide a fund for redeeming what was issued, called upon the States to pay, etc. But the public treasury, receiving no recruit from taxes, was from time to time replenished with new emissions; depreciation, instead of receiving a check, proceeded with redoubled vigor. On September 1, 1779, the sum emitted and in circulation amounted to \$159,948,880; and as there was a great outcry on account of the depreciation and the floods of money emitted, Congress resolved that they would on no account whatever emit more bills than to make the whole two hundred millions. Congress was compelled by necessity to issue this remainder, etc.

The rate of exchange for hard money at Philadelphia was, at the end of 1776, $1\frac{1}{4}$ to 1; of 1777, 4 to 1; of 1778, 9 to 1; of 1779, 45 to 1; of 1780, 100 to 1; in May, 1781, from 200 to 500 to 1, when it ceased to circulate there, and, soon afterward, elsewhere.

The quantity of the paper money destroyed its value, although it was sustained by legal-tender laws, limitation of prices, penal laws, vigilance committees, and military force.

Thos. Paine, in a letter to Danton, dated May, 1793, said: "The assignats are not of the same value they were a year ago, and as the quantity

increases the value of them will diminish. This gives the appearance of things being dear when they are not so in fact, for in the same proportion that any kind of money falls in value, articles rise in price. If it were not for this the quantity of assignats would be too great to be circulated. Paper money in America fell so much in value from the excessive quantity of it that in the year 1781 I gave \$300 for one pair of worsted stockings. What I write to you on this subject is experience and not merely opinion."

While Continental money remained a legal tender, debtors, executors, trustees, and guardians could easily discharge their liabilities. But after the collapse and the repeal of the legal-tender acts, debts theretofore incurred were in a different category. Debts were scaled down, stay laws passed, about all kinds of property made a legal tender at a valuation, and in some States new bills of credit were issued. There was financial anarchy and almost civil war.

A Coinage and a Money Unit.

The States having achieved their independence and survived their difficulties, adopted the present Federal Constitution and therein provided that Congress shall have power to coin money, regulate the value thereof and of foreign coin, and fix the standard of weights and measures. Also that: No State shall coin money, emit bills of credit, make anything but gold and silver coin a tender

in payment of debts, or pass any law impairing the obligation of contracts.

The Secretary of the Treasury (Mr. Hamilton), in his report relative to the establishment of a mint, etc., January 28, 1791, said: "The pound, though of various values, is the unit of account in all the States. But it is not equally easy to pronounce what is to be considered as the unit in the coins. The manner of adjusting the foreign exchanges would seem to indicate the dollar as best entitled to that character. In these the old piaster of Spain, or old Seville piece of eight rials, of the value of 4s. 6d. (sterling), is evidently contemplated. But this circumstance in favor of the dollar loses much of its weight from two considerations. That species of coin has never had any settled or standard value according to weight or fineness, but has been permitted to circulate by tale, without regard to either, very much as a matter of convenience, while gold has had a fixed price by weight and with an eye to its fineness. This greater stability in the value of gold is an argument of force for regarding the money unit as having been hitherto virtually attached to gold; $24\frac{3}{4}$ grains of fine gold have corresponded with the nominal value of the dollar in the several States, without regard to the several denominations of its intrinsic worth. But if the dollar should, notwithstanding, be supposed to have the best title to being considered as the present unit, it would remain to determine what kind of a dol-

lar ought to be understood, or in other words what quantity of silver."

"The old piaster of Spain, which appears to have regulated our exchanges, weighed 17 dwt. 12 grains, and contained $386\frac{3}{4}$ grains of fine silver. But this piece has been long since out of circulation. The dollars now in common currency are of recent date and much inferior to that, both in weight and fineness. The average weight of these, upon different trials in large masses, has been found to be 17 dwt. 8 grains. Their fineness is less precisely ascertained; the result of various assays made by different persons under the direction of the late Superintendent of the Finances, and of the Secretary, being as various as the assays themselves. The experiment which appears to have the best pretensions to exactness would make the new dollar to contain 370.933 grains of pure silver. And the Secretary finally reached the conclusion that the sum of money of account of each State, corresponding with the nominal value of the dollar in each State, corresponds also with $24\frac{3}{4}$ grains of fine gold and with something between 368 and 374 grains of fine silver." (The average of these is 371.)

By an act of Congress, April 2, 1792, establishing a mint, etc., it was enacted that the money of account of the United States shall be expressed in dollars or units, dimes or tenths, cents or hundredths, and mills or thousandths, and that all accounts in the public offices and all proceed-

ings in the courts of the United States shall be kept and had in conformity to this regulation; also, that there shall be from time to time struck and coined at the mint, coins of gold, silver, and copper, having thereon the devices and legends in the act specified, to wit: In gold, eagles (\$10), half and quarter eagles; in silver, dollars, halves, quarters, dimes, and half-dimes; in copper, cents, and half-cents. The dollars each to be of the value of the Spanish milled dollar as the same is now current, and to contain 371.25 grains (troy) of pure silver or 416 grains of standard silver; the other silver coins to be of standard silver and of proportionate weight and value; the eagle to contain 247.50 grains of pure or 270 grains of standard gold; the half and quarter eagles to be of standard gold and of proportionate weight and value.

Also, that the gold and silver coins issued from the mint shall be a lawful tender in all payments, those of full weight at their nominal value and those of less weight at values proportional thereto.

Also, that the proportional value of gold to silver in all coins which shall by law be current within the United States shall be as fifteen to one, according to quantity in weight of pure gold or pure silver; that is to say, every fifteen pounds weight of pure silver shall be of equal value in all payments with one pound weight of pure gold, and so in proportion as to any greater or less quantities of the respective metals.

In estimating coins the alloy is not valued.

The coinage of gold and silver was made free and gratuitous.

Foreign Coins. By the act of February 9, 1793, regulating foreign coins, etc., sundry foreign gold and silver coins therein named were to pass current as money within the United States and be a legal tender at the rates therein specified. But all such coins received in payment of moneys due the United States (Spanish milled dollars and parts thereof excepted), after coinage should begin at the mint, were to be coined anew. Other acts of a similar nature were passed from time to time until, by the act of February 21, 1857, all former acts authorizing the currency of foreign coin and declaring the same a legal tender in payment of debts were repealed.

Ever since the act of 1792 the money unit of the United States has been called a dollar; all accounts and sums of money are stated in terms of it and its decimal parts. And by that act a dollar signified $24\frac{3}{4}$ grains of pure gold, or $371\frac{1}{4}$ grains of pure silver, in United States coin, or in foreign coin made current by law.

But the relative market value of the two metals having varied from the ratio of 15 to 1 by the act of June 28, 1834, "concerning the gold coins, etc.," the weight of the eagle was reduced to 232 grains of pure and 258 grains of standard gold. This altered the coinage ratio to $\frac{371.25}{23.2} = 16\frac{1}{2}$ to 1; the commercial ratio then was 15.73 to 1. Silver

was intentionally undervalued in order, by its exportation, to bring about a single gold standard. The gold coins previously minted were given the value of \$0.948 per pennyweight; those remaining in the country were recoined.

Afterward, by the act of January 18, 1837, "supplementary to the act establishing a mint, etc.," the standard of nine-tenths fine for both gold and silver coins was adopted. The standard weight of the gold coins was left the same as under the act of 1834; the alloy was reduced and a little more gold added. The weight of the silver dollar was reduced to $412\frac{1}{2}$ grains by reducing the alloy, the other silver coins to be in proportion. The coinage ratio thereby became $\frac{371.25}{23.22} = 15.988+$ to 1, the commercial ratio then being 15.83 to 1, and silver continued to be worth more than its coinage ratio until 1874.

In order to prevent the exportation of the fractional silver coins, by the act of February 21, 1853, "amendatory of existing laws relative to the half-dollar, quarter, dime, and half-dime," the weight of the half-dollar was reduced to 192 grains, and of the others in proportion. Their legal-tender power was limited to \$5 in any one payment, and their coinage to be done solely on Government account. They were reduced from standard to token coins.

The coinage of gold dollars and of double eagles was authorized by the act of March 3, 1849.

This suffices to show the alterations made in the coinage prior to the year 1873.

Bank Notes. Although it was generally conceded that Congress could establish a money system, give its unit a name, and manufacture coins pursuant thereto, yet its power to issue directly or indirectly paper tokens in any form suitable for circulation as money was denied by the advocates of State rights, although it was adjudged by the Supreme Court of the United States that Congress could create a bank with power to issue bank notes; and it was also held by that court that such notes issued by a corporation created by a State were not "bills of credit," prohibited by the Federal Constitution. The result was that with the exception of a first and second bank of the United States, hereafter mentioned, Congress created no banks until 1863; and until then the several States competed with each other in stuffing the currency with bank notes issued by corporations created under State authority. The doctrine generally received and acted on was, that Congress could coin money and the States could expel it from circulation and from the country by issues of bank notes.

But it finally became obvious that Congress could not regulate the value of money unless it had the power to regulate its kind and quantity. Whereupon, about 1883, it was finally adjudged that "Congress has power to provide a National currency and secure the benefit of it to the peo-

ple. To this end Congress has denied the quality of legal tender to foreign coin, and has provided by law against the imposition of counterfeit and base coin on the community. To the same end Congress may restrain by suitable enactments the circulation of any notes not issued under its authority. Without such power its attempts to secure a sound and uniform currency to the country must be futile. Also, that Congress can authorize the direct issue of bills of credit and make them a legal tender in all payments."

The first bank of the United States was established by an act of Congress, approved February 25, 1791, capital, \$10,000,000; to continue until March 4, 1811. This act was passed more than a year prior to the act establishing a coinage and a money unit to be called a dollar.

At first the States created banks of issue under special charters, a few prior to 1790. By 1812 they had become numerous, with a nominal capital exceeding \$75,000,000, which usually consisted chiefly of the notes of the subscribers to the stock.

The Banking Principle. According to this principle, a bank of issue needs no more money to put it in operation than enough to furnish an office and to print its bank notes. Having filled its coffers with them it is ready to exchange them for commercial paper, discounted at the current rate; it exchanges its notes not bearing interest for the notes and bills of others bearing interest.

When the paper discounted matures and is paid, it has redeemed its notes or acquired the means to do so. Thereupon it can, at least theoretically, continue to discount commercial paper and redeem its notes in that manner for all time, although bank notes became so abundant that a pair of worsted stockings would sell for \$300, and other things in proportion. But a demand for specie knocks the wind out of the banking principle, and that occurs when specie is wanted for exportation or other purpose. The notes get into circulation under the faith that they will be redeemed on demand, and if payment is refused the solvency of the bank is distrusted and its notes become uncirculated. But the banking principle was aided by circulating the notes as far away from home as possible and scattering them broadcast so that they might slowly return in single file. This was effected by exchanging notes with distant banks under a mutual understanding to scatter the notes as much as possible, or by lending them, e. g., at Chicago to solvent buyers of live stock, grain, etc., from people residing west of the Mississippi.

After a bank has put its notes in circulation and thereby assisted in providing the people with a currency, it can refuse to redeem the notes and still continue to do business, provided its debtors will pay or can be forced to pay their debts. Having borrowed its capital from the people it would lose it by redeeming its notes. Therefore,

it was customary, when the notes became distrusted so that it would be difficult or impossible to reissue them, to suspend payment. The Bank of England suspended specie payment in 1797, and did not resume for twenty years or more. Why should not American banks imitate so illustrious an example?

In "Gouge on Banking" (Part II, p. 143) is quoted a report of the directors of the State Bank of South Carolina, dated October 1, 1819, in which the effects produced by the resumption of specie payments are deplored as unnecessary evils. "It becomes necessary (say the directors) to inquire whether, in the present state of the world, a metallic currency sufficient for the wants of our country is attainable, and whether, if it be obtained, it will be worth the necessary cost; whether, in fact, a currency equally good, perhaps better, may not be established without any of those sacrifices which our country has been already obliged to make, and which it must for a long time make, to secure this fugitive and evanescent object. In Great Britain, where alone, in modern days, gold and silver have for a short time been left freely to find their value in an unshackled market, they have been known to fluctuate in value nearly 50 per cent in the course of a few months, a fluctuation which no paper currency has undergone, except such as has been issued by the mandates of arbitrary and necessitous governments, where no value is re-

ceived for their emission, no pledge given for their redemption."

No doubt the notes of this bank never fluctuated in value relative to each other; two notes for the same amount were always of equal value.

But in "Gouge on Banking" (Part II, p. 166) is given a table showing the discount on the notes of the Pennsylvania country banks, not in specie but in Philadelphia bank paper, from which it appears that November 1, 1819, the discount was, of the notes of one bank, 60 per cent; of eight banks, 50 per cent; others from 15 to 45 per cent, and the notes of seven out of a total of thirty-three were at par. On the following page of the same book is given a table of the prices of bank notes at Baltimore, August 7, 1819, the discount on them being as follows: New England notes, 1 to 6; Pennsylvania, 1 to 60; Delaware, 1 to 50; Maryland, 1 to 40; District of Columbia, 1 to 60; Virginia, $1\frac{1}{2}$ to 25; North Carolina, 20 to 25; South Carolina, 8 to 10; Georgia, 7 to 8; Kentucky, 15 to 25; Ohio, 10 to 50; Indiana, Illinois, and Missouri, 15 to 60.

To which is added the statement that the prices of bank notes varied several per cent in the course of a week. The notes which were at par in one part of the country were in other parts at a heavy discount. A bank's paying specie did not prevent its notes from depreciating, for nobody knew how long any distant bank would continue to pay specie. All banks whose notes were

at a discount at New York of less than 5 per cent, and some of the others, were understood to pay specie on demand.

When the banks suspended specie payment, as they often did, the people, and the government also, had the benefit of Hobson's choice — they could use the dishonored bank notes as a currency or go without any kind of money. The notes being of various and variable values, everybody could estimate daily, by the aid of bank-note detectors and reporters, the specie value of his money. For others assisted in furnishing the people with a currency, to wit, ordinary counterfeits; genuine notes altered from lower denominations to higher ones; genuine notes of failed banks altered to the names of solvent banks; notes of banks having no existence; notes purporting to be issued by a bank which never issued any of that denomination.

According to "Gouge on Banking," Part II, p. 160, Governor Wolcott, in an address to the Legislature of Connecticut in May, 1826, said: "The currency which is required by the daily exchange between all the people, and by which the transactions between farmers, mechanics, laborers, manufacturers, and traders is regulated, is almost exclusively in bank notes, which are issued by a great number of independent corporations which possess an exclusive privilege of creating notes for their own benefit."

"This monopoly is here so exercised that neither

the amount of currency which is issued, nor the amount of that which is suddenly suspended, withdrawn, or annihilated, is subject to any practical limitation other than what must arise from the state of foreign and domestic exchanges, the speculations of individuals, political events, and the necessities or caprices of the numerous monopolizing incorporations who entirely control the circulation of the country. These last observations require no other confirmation than a reference to the notorious fact that no coins circulate among the people, except small sums of copper and the fractional parts of a dollar in silver, which is our silver unit. Our unit of gold in a coin of \$10, which, with its fractional parts in coins of \$5 and \$2.50, have wholly vanished from circulation. The effects produced on the people are that no man can travel fifty miles in any direction without receiving paper notes of which he possesses no means of ascertaining the value, or even the authenticity, and this difficulty increases in proportion to the distance of an individual from some one of these banks. From these causes the whole country is subject to complex evils, arising from either a redundant or too restricted circulation of the only currency which can be obtained, and hence sudden variations in the prices of exchangeable commodities far exceeding the customary profits of regular industry and commerce, thereby converting all transactions of business, especially at a distance from the seats of foreign commerce,

into mere lotteries. It is amidst explosions of credit, principally occasioned by the conduct of banks, that every class of industrious citizens and all our enterprising young men are exposed to repeated losses, against which no vigilance can guard and no prudence exempt them."

War was declared against Great Britain in June, 1812, and terminated in 1815. Washington was taken by a small invading force and the public buildings burned. Insolvency compelled peace without honor, except on the water, and finally at New Orleans.

There was no National currency, no money or its equivalent, which represented the same value in all places. The first National bank ceased to exist in 1811. Local banks overspread the land, and upon these the Government was thrown for currency and for loans. They, unequal to the task, and having removed their own foundations by banishing specie by profuse issues, sank under the double load of National and local wants, and stopped specie payments, except New England, which section was unfavorable to the war. Treasury notes were then the resort of the Government. They were issued in great quantities, and not being convertible into coin at the will of the holder, soon began to depreciate. In the second year of the war, depreciation had become enormous. An officer setting out from Washington with a supply of these notes found them sunk one-third by the time he reached the northern

frontier. They could not be used as a currency, but only to obtain local bank paper, itself greatly depreciated. All Government securities were under par, even for depreciated bank notes. Loans were obtained with great difficulty at large discount, on the lender's own terms, and still attainable only in depreciated bank notes. (Benton's "Thirty Years' View," Vol. I, p. 1.)

The form of these Treasury notes was, in substance, that the United States would receive this note for — dollars, with interest from the date thereof, in all payments to *them*, or issue on demand therefor to A B or order 6 per cent stock, agreeably to the act of Congress. Total amount issued, \$36,680,794. Of the eighty millions of loans negotiated by the Government the avails were only thirty millions, after deducting discounts and depreciations. ("United States Notes," by Knox, Chap. 5.)

The population had trebled since the days of Continental money, and a Federal Government existed with adequate powers, but its administration was in the hands of the advocates of State rights, who shuddered at the idea of a Treasury note drawn payable to the bearer, or made a legal tender in any form. The United States then existed in the plural number only.

But the President (Mr. Madison) having been chased out of Washington by the enemy, a currency consisting of State bank notes sickened on the Democratic stomach, and that party, with the

President at its head, discovered sufficient authority to establish the Second Bank of the United States, capital \$35,000,000, created by an act of Congress approved April 10, 1816, to continue until March 3, 1836. The United States owned one-fifth of the stock and lost it all.

In support of this measure Mr. Calhoun said in the House: "There has been an extraordinary revolution in the currency of the country. By a sort of undercurrent the power of Congress to regulate the money of the country has caved in, and upon its ruin has sprung up these institutions which now exercise the right of making money in and for the United States. For gold and silver are not the only money, but whatever is the medium of exchange and sale, in which bank paper alone was now employed and had become the money of the country. A change, great and wonderful, has taken place, which divests you of your rights and turns you back to the Revolutionary War, in which every State issued bills of credit, which were made a legal tender and were of various values. We have in lieu of gold and silver a paper medium, unequally and generally depreciated, which affects the trade and industry of the nation, which paralyzes the National arm, and which sullies the faith, both public and private, of the United States."

And he further stated that the banks had one hundred and seventy millions in circulation, and

not over fifteen millions in specie for its redemption.

A currency composed of State bank notes having proved to be disastrous, by a resolution, relative to the more effectual collection of the public revenue, approved April 30, 1816, the Secretary of the Treasury was directed to adopt such measures as he may deem necessary to cause, as soon as may be, all duties, taxes, debts, and sums of money, accruing or becoming payable to the United States, to be collected and paid in the legal currency of the United States, or Treasury notes, or notes of the Bank of the United States, as by law provided, or in notes of banks which are payable and paid on demand in the said legal currency, and that from and after February 20th next, no such duties, taxes, debts, or sums of money accruing to the United States ought to be collected or received otherwise than in the said legal currency, Treasury notes, notes of the Bank of the United States, or notes of banks payable and paid on demand in said legal currency.

The money of the country must have been bad enough when Congress saw fit to declare that, after the expiration of nearly a year, only specie, its own notes, and the notes of specie-paying banks "ought" to be received at the Treasury.

By the charter of the Second Bank of the United States, its bills and notes payable on demand were made receivable in all payments to

the United States unless otherwise directed by an act of Congress; also, the deposits of the money of the United States in places in which the bank and branches thereof were established were to be made in said bank or branches thereof, unless the Secretary of the Treasury shall at any time otherwise direct; in which case the Secretary of Treasury shall immediately lay before Congress, if in session, and if not, immediately after the commencement of the next session, the reasons of such order or direction.

According to Mr. Benton ("Thirty Years' View," Vol. I, p. 242), there was a part of the Revolutionary debt amounting to thirteen and a quarter millions which bore interest at 3 per cent. The price of this stock in 1817 was 64 per centum; the money was in the Bank of the United States to pay it, a gratuitous deposit bearing no interest. I had submitted a resolve early in my term of service to have this stock purchased at its market value, which was resisted and defeated by the friends of the bank. I then moved a resolve that the bank pay interest on the deposits, which was opposed and defeated in like manner.

In March, 1832, the bank was notified that the Government desired to pay off the outstanding 3 per cents, to wit, nine millions, the public deposits then being \$12,000,000. Instead of assisting, the bank secretly took steps to prevent their redemption. The money was worth 7 per cent to the bank. But its conduct became known, where-

upon its president said the arrangement was made for the public good. To disburse the money would tighten the money market. Every bank made a depository of public funds objects to their withdrawal for the same ostensible reason, but in fact because the profits of the bank would be thereby curtailed.

General Jackson, then President, became hostile to the bank, and the Secretary of the Treasury, as directed by the President, removed the public deposits from it.

The entire National debt was paid by January 1, 1835, leaving a large and increasing surplus of revenue, and by an act of Congress, approved June 23, 1836, the public deposits were to be made in specie-paying State banks as in the act specified, by which it was also provided that the money in the Treasury on January 1, 1837, reserving \$5,000,000, should be deposited with the several States upon the terms and in the proportions as in the act specified; the same to be made, one quarter on January 1, 1837; one quarter on April 1, one quarter on July 1, and one quarter on October 1, 1837.

The surplus revenue January 1, 1837, after reserving the five millions, amounted to \$37,468.-859.97. The first installment was paid in specie or its equivalent, the second in valid money, the third in depreciated paper, and the fourth was never made. The revenues were from six to ten millions short of the expenditures, and it be-

came necessary to issue Treasury notes to meet the expenditures to very large amounts, as to which, see "United States Notes," by Knox, Chap. 6.

The banks suspended specie payments in May, 1837. Mr. Benton claimed that he foresaw it. "I recalled the recollection of the times of 1818-19 when the Treasury reports of one year showed a superfluity of revenue for which there was no want, and of the next a deficit which required to be relieved by a loan, and argued that we must now have the same result from the bloat in the paper-money system which we then had. Of the act which rescinded the specie circular (of General Jackson) and made the notes of the local banks receivable in payment for all federal dues, I said, 'I oppose it.' I did not join in putting down the Bank of the United States to put up a wilderness of local banks. I did not join in putting down the paper currency of a National bank to put up a National paper currency of a thousand local banks." ("Thirty Years' View," Vol. II, Chap. 2.)

Mr. Benton also says (Ib., Chap. 7): "A great disturbance took place in the business of the country from the stoppage of the banks. Their agreement to receive each other's notes made them the sole currency of the country. It was a miserable substitute for gold and silver, falling far below these metals when measured against them, and very unequal to each other in different parts of the country. Those of the interior and

of the West being unfit for payments in the great commercial Atlantic cities, were far below the standard of the notes of those cities, and suffered a heavy loss in all remittances to those cities, to which points the great payments tended. Specie disappeared as a currency, and became an article of merchandise. Even metallic change disappeared down to the lowest subdivision of the dollar. Its place was supplied by every conceivable variety of individual and corporation tickets. Taken by surprise in the deprivation of its revenues, the Federal Government could only do as others did—receive and pay out depreciated paper."

The collapse of the State banks in May, 1837, caused the Democratic party, with Mr. Van Buren at its head, to favor an independent Treasury and hard money for Government dues, and an act for that purpose was passed July 4, 1840.

In support of the measure Mr. Benton said: "I do not pretend to estimate the moneyed losses, direct and indirect, to the Government alone from the use of local bank notes in the last twenty-five years, including the war and covering three general suspensions. Leaving the people out of view, as a field of losses beyond calculation, I confine myself to the Federal Government and say its losses have been enormous. We have had three general stoppages of the local banks in the short space of twenty-two years," etc. ("Thirty Years' View," Vol. II, Chap. 15.)

To show the condition of the people after the collapse of 1837, Governor Ford, in his "History of Illinois," said: "The treasury of the State was indebted (1842) for the ordinary expenses of government to about \$313,000. Auditor's warrants were selling at 50 per cent discount, and there was no money in the treasury whatever, not even to pay postage on letters. The treasury was bankrupt. A debt of fourteen millions had been contracted for canal, railroad, and other purposes. The currency of the State had been annihilated; there was not over two or three hundred thousand dollars of good money in the pockets of the whole people. They were indebted to the merchants, nearly all of whom were indebted to the banks or foreign merchants, and the banks owed everybody, and none were able to pay."

During this period the several States resorted to stay valuation and appraisement laws. A large part of the insolvency was settled under the bankrupt act of 1841.

In 1840 Mr. Benton moved for leave to bring in a bill to tax the circulation of banks, bankers, and all corporations, companies, or individuals which issued paper currency. He said nothing was more reasonable than to require the moneyed interest which was employed in banking, and especially in that branch of banking which was dedicated to the profitable business of converting lampblack and rags into money, to contribute to the support of the Government. While the pro-

ducing and laboring classes were all taxed in their salt, iron, sugar, etc., the banking interest, which manufactured and monopolized money, which put up and put down prices, and held the whole country tributary to its wealth, paid nothing. In other countries the banking interest was subject to taxation. The tax on circulation and bills of exchange was a handsome item in the budget of British taxation. In this country, during the war with Great Britain, the banking interest had been taxed in its circulation, discounts, and bills of exchange. At the end of the war this tax was abolished, while most of the war taxes were continued in force, among them the tax on salt and other necessaries of life. It is time to make the banks pay and to let salt go free. But his motion came to nothing. (Benton's "Thirty Years," etc. Vol. II, p. 179.)

The hard times ensuing after 1836-7 defeated the Democratic party in the Presidential canvass of 1840, and the independent Treasury act was repealed August 13, 1841. But this party having regained power in 1845, reëstablished their measure by an act for that purpose, approved August 6, 1846, by which it was provided that on and after January 1, 1847, all sums due the United States should be paid in coin, and after April 1, 1847, all payments made on account of the United States should be made in coin or Treasury notes if the creditor agree to receive them. Thereafter until the war of secession the Federal Government

kept its own funds and did business on a specie basis.

About 1840 the notion began to prevail that banking ought to be free; that everybody ought to be allowed to issue bank notes who could comply with the conditions prescribed. But these banks failed also. In 1854 a free banking system adopted in Indiana went to pieces and the holders of the notes suffered great loss.

In 1857 there was another bank suspension, the effects of which continued when the Civil War began. In the fall of 1860 Mr. Lincoln was elected President, and thereupon the Southern States attempted to secede, and to that end combined as the Confederate States, in February, 1861. The State of Illinois then had a free banking system. The banks were numerous, small, and generally located in out-of-the-way places, with a view to avoid the redemption of their notes. They were so many petty paper-money factories, having about \$12,000,000 in notes in circulation and only \$302,905 in specie for their redemption. The bonds held in the State treasury to secure payment of the notes were chiefly bonds of the Southern States. As they seceded their bonds fell in value; even bonds of the United States fell to a heavy discount. The people lost a large per cent of the face value of this "stumptail" money, and were left without a currency. The prostration was complete. The paper money issued out of the National Treasury

was about the first good money which the people of Illinois ever had, and enabled them to show their hand and make their mark in the war

A NATIONAL CURRENCY.

The war of secession caused its adoption and the suppression of paper money issued under State authority.

Mr. Lincoln was elected President in the fall of 1860, and thereupon the Southern States attempted to secede from the Union, and to that end combined as the Confederate States. On April 14, 1861, Fort Sumter surrendered to the rebels, and thereupon the President issued a call for 75,000 men ; also for a special session of Congress, to meet July 4, 1861. In May, 1861, he called for thirty-nine volunteer regiments of infantry and one of cavalry ; also directed an increase of the regular army by eight regiments of infantry, one of artillery, one of cavalry, and the enlistment of 13,000 seamen.

Congress met July 4, 1861. The Union army was defeated at Bull Run July 21, 1861, and thereupon Congress authorized the enlistment of 500,000 volunteers. In August, 1861, the Confederate Congress authorized the Confederate President to accept the services of 400,000 volunteers, to serve not less than one nor more than three years.

The rebels then had in the field not less than 210,000 men. (McPherson's "History of the Rebellion," p. 117.)

Lee surrendered to Grant April 9, 1865, and the war ended soon thereafter, at which time the Union had in the field an army of 1,000,016 men and a navy of 530 vessels of all kinds, armed with 3,000 guns and manned by 51,000 men. The public debt, which, on June 20, 1860, was \$64,769,703.08, on August 31, 1865, was \$2,845,907,626.56 ("United States Notes," Knox, pp. 72 and 85), a condition of things quite different from that existing in March, 1861, when treason and rebellion beleagured Washington, and Mr. Lincoln was forced to reach it in disguise.

Pursuant to an act of Congress of July 17, 1861, authorizing a loan of \$250,000,000, and an act of August 5, 1861, supplementary thereto, the Secretary of the Treasury (Mr. Chase), on August 15, 1861, effected an arrangement with the associated banks of Boston, New York, and Philadelphia, by which they agreed to take fifty millions of the loan in three-year Treasury notes, bearing 7.3 per cent interest, payable semi-annually, with the privilege to take a like amount on October 15th, then next, and another like amount on December 15th following. In aid of the loan as agreed, the Secretary caused books of subscription to be opened throughout the country and the people subscribed liberally, so that the banks took the second fifty

millions in similar notes, and on November 16, 1861, took the third fifty millions in twenty-year 6 per cent bonds, at a rate equivalent to bonds bearing 7 per cent, payable semi-annually.

Demand Notes. Also, the above acts authorized the Secretary, as a part of the loan, to issue in exchange for coin, or in payment of salaries and other dues from the United States, Treasury notes of denominations not less than \$5, not bearing interest but payable on demand and receivable for all public dues, to an amount not exceeding \$50,000,000, and reissuable until December 31, 1862. In form these notes were: "On demand the United States promise to pay the bearer — dollars." They were the first paper money issued directly out of the Treasury. The ordinary Treasury notes were in large denominations, payable after a time specified, to the order of — and bearing interest.

Congress met in regular session December 2, 1861, and the Secretary, in his report thereto, estimated that, if the war continued, the public debt, which was \$90,867,828 on July 1, 1861, would be five hundred and seventeen millions on July 1, 1862, and eight hundred and ninety-seven millions on July 1, 1863, and also said: "To enable the Government to obtain the necessary means for prosecuting the war to a successful issue, without unnecessary cost, is a problem which must engage the most careful attention of the Legislature. The Secretary has given to this problem the best

consideration in his power, and now begs leave to submit to Congress the result of his reflections."

"The circulation of the banks of the United States on January 1, 1861, was computed to be \$202,000,767, of which \$150,000,000, in round numbers, was in the States now loyal. The whole of this circulation constitutes a loan without interest from the people to the banks, costing them nothing except the expense of issue and redemption and the interest on the specie kept on hand for the latter purpose; and it deserves consideration whether sound policy does not require that the advantages of this loan be transferred, in part at least, from the banks, representing only the interests of the stockholders, to the Government, representing the aggregate interests of the whole people. It has been well questioned by the most eminent statesmen whether a currency of bank notes issued by local institutions under State laws is not in fact prohibited by the National Constitution. Such emissions certainly fall within the spirit, if not within the letter, of the constitutional prohibition of the emission of "bills of credit" by the States and of the making by them of anything except gold and silver coin a legal tender in payment of debts."

"However this may be, it is too clear to be reasonably disputed that Congress, under its powers to lay taxes, to regulate commerce, and to regulate the value of coin, possesses ample authority to control the credit circulation which enters so

largely into the transactions of commerce, and affects in so many ways the value of coin. In the judgment of the Secretary, the time has arrived when Congress should exercise this authority. The value of the existing bank-note circulation depends on the laws of thirty-four States and the character of some sixteen hundred private corporations. It is usually furnished in greatest proportions by institutions of least actual capital; circulation, commonly, is in the inverse ratio of solvency. Under such a system, or lack of system, great fluctuations and heavy losses in discounts and exchanges are inevitable, and not infrequently, through failure of the issuing institutions, considerable portions of the circulation become suddenly worthless in the hands of the people. The recent experience of several States in the valley of the Mississippi painfully illustrates the justice of these observations, and enforces, by the most cogent, practical arguments, the duty of protecting commerce and industry against the recurrence of such disasters. The Secretary thinks it is possible to combine with this protection a provision for circulation, safe to the community and convenient for the Government."

"Two plans for effecting this object are suggested. The first contemplates the gradual withdrawal from circulation of the notes of private corporations, and for the issue in their stead of United States notes payable in coin on demand,

in amounts sufficient for the useful ends of a representative currency. The second contemplates the preparation and delivery to institutions and associations, of notes prepared for circulation under national direction, and to be secured as to prompt convertibility into coin by the pledge of United States bonds and other needful regulations."

"The first of these plans was partially adopted at the last session of Congress, in the provision authorizing the Secretary to issue United States notes payable in coin. This provision may be so extended as to reach the average circulation of the country, while a moderate tax, gradually augmented, on bank notes, will relieve the national from the competition of local circulation. It has already been suggested that the substitution of a national for a State currency upon this plan would be equivalent to a loan to the Government without interest, except on the fund to be kept in coin, and without expense except the cost of preparation, issue, and redemption; while the people would gain the additional advantage of a uniform currency, and relief from a considerable burden in the form of interest on debt." But he saw the specter of continental money, and for that and other reasons preferred his second plan, i. e., National bank notes.

On or just prior to December 31, 1861, all the banks then doing business suspended specie payments, and notes of any kind "payable in coin on

demand" were postponed into the indefinite future. The war was to be prosecuted, if at all, with an irredeemable paper currency.

At that time the outstanding bank circulation was \$183,000,000 and their specie reserve \$102,000,000 ("Money in Politics," by J. K. Upton, late Assistant Secretary of the Treasury, p. 74). The banks of New York alone, according to the president of one of them, then held over \$40,000,000 in specie ("Money, Its Laws and History," by H. V. Poor, p. 561). Mr. Blaine ("Twenty Years in Congress," Vol. I, Chap. 19) said: "At the opening of the year 1862 the Government finances were in a critical condition. Confederate bonds were more popular in England than the bonds of the United States. The bankers of Europe, with the Rothschilds at their head, would not touch our securities. We were thrown on our own resources. With one hundred millions of coin in the banks and one hundred and fifty millions hoarded among the people, it was obviously impossible to conduct the business of the country and to carry on the war in cash payments."

The coinage of gold at the mint prior to 1862 was \$545,150,625.50, or about \$540,000,000 after deducting recoinages; in silver there was only that coined during the period 1853-61, to wit, \$49,642,031 in fractional silver tokens. About \$340,000,000 in gold coin had been expelled from the country previous to 1862, by stuffing the currency with State bank notes. The eagles on

this amount of gold coin had flown away to the same roost abroad to which the "dollars of the daddies" had previously resorted. Had all the gold and silver coined previous to 1862 remained in the country, and there had been no bank notes, it would not have been so obviously impossible to maintain specie payments during the war. During the period 1862-5 there was coined at the mint, in gold, \$91,698,032, and in silver \$3,362,706, being of the domestic product during that time.

The panic of 1857 had thinned out the bank-note currency. But if the banks doing business on December 31, 1861, had a circulation of \$183,000,000 and a specie reserve of \$100,000,000, it was manifestly dishonest for them to suspend specie payments and hold the coin for sale thereafter at a premium. They never resumed payment in coin. They locked up their specie as a "precautionary measure!"

When the demand notes were first issued in August, 1861, the associated banks refused to receive them except on special deposit. And in January, 1862, after specie payments were suspended, the associated banks resolved that before we receive the demand notes on deposit we must require that such legal provision be made by Congress as shall insure their speedy redemption ("United States Notes," Knox, Chap. 9.) These notes competed with their bank notes as a circulating medium, were receivable for duties on imports and all public dues, while their suspended

bank notes were not legally receivable for anything.

In February, 1862, 6 per cent United States bonds were selling in the market at 88, and 5 per cents at $78\frac{1}{2}$ ("United States Notes," Knox, p. 97), and these prices were in depreciated bank notes.

Greenbacks. By the act of February 25, 1862, the Secretary of the Treasury was authorized to issue \$150,000,000 of United States notes (greenbacks), not bearing interest, payable to the bearer at the Treasury of the United States, of such denominations, not less than \$5, as he might deem expedient, which notes were made receivable in payment for all dues to the United States except duties on imports, and of all claims and demands against the United States except for interest on the public debt, which shall be paid in coin, and which notes were made lawful money and a legal tender in payment of all debts, public and private, within the United States, except duties on imports and interest as aforesaid; the notes to be fundable into 6 per cent bonds; to be received at their par value in payment for any loans thereafter negotiated; and to be reissued from time to time as the exigencies of the public interest may require.

And to enable the Secretary to fund the Treasury notes and floating debt he was authorized to issue and sell not exceeding five hundred millions of 6 per cent five-twenty bonds.

And the act further provided that duties on

imported goods should be paid in coin or in the demand notes theretofore authorized, which coin should be a special fund to be applied first to the payment in coin of interest on the public debt, and secondly as a sinking fund, etc., as in the act specified.

In pursuance of this financial policy all interest on the funded debt was regularly paid in coin.

In January, 1862, after the bill was introduced in Congress which resulted in the act above referred to, the associated banks of Boston, New York, and Philadelphia sent a powerful lobby to Washington to oppose it and the schemes of the Secretary. In his report he had proposed to nationalize the currency. The whole State bank system was opposed to it, and were violently opposed to all irredeemable paper money except their own. The offer of the National bank system under National control failed to placate banks whose issues were under less control. They proposed a plan, to wit: No legal-tender notes and no more demand notes; the Government to become one of their customers and keep its deposits with them, checking out the money as occasion might require; bonds to be issued and sold for whatever they might bring, with power in the Secretary to hypothecate bonds as security for loans, which, if not paid at maturity, the bonds might be sold to the highest bidder. All the banks in the States of Massachusetts, New York, and Pennsylvania then had a circulation of about

\$66,000,000, and this they either could not or would not redeem. The expenses of the war were then running on an average of \$2,000,000 per day. ("History of the Legal Tender Paper Money," etc., by E. G. Spaulding, chairman of the Sub-committee of Ways and Means at that time.) The plan of these confederate banks failed and their officers went home, not to pay their suspended paper money, but to inflate it. State bank notes in the war of 1812 had "paralyzed the National arm and sullied the faith, both public and private, of the United States." In the crisis of 1861-65, the men at the helm did not intend to allow the National cause to be swamped by State bank money.

The Secretary of the Treasury (Mr. Chase), in a letter addressed to Mr. Stevens, chairman of the Committee of Ways and Means, after expressing his great aversion to making anything but coin a legal tender in payment of debts, said: "It is, however, at present impossible, in consequence of the large expenditures entailed by the war, and the suspension of the banks, to procure sufficient coin for disbursements; and it has, therefore, become indispensably necessary that we should resort to the issue of United States notes. The making them a legal tender might still be avoided, * * but unfortunately some persons and institutions refuse to receive and pay them," etc. And in a letter to Mr. Spaulding, dated February 3, 1862, the Secretary said: "It is true that I came with

reluctance to the conclusion that the legal-tender clause is a necessity, but I came to it decidedly and I support it earnestly. * * The Treasury is nearly empty. I have been obliged to draw for the last installment of the November loan; so soon as it is paid, I fear the banks generally will refuse to receive the United States notes. You will see the necessity of urging the bill through without more delay."

In the debate on the bill, Mr. Hooper, one of the committee of Ways and Means, said in the House: "The levying of the contemplated tax, the proper inauguration of the new banking system, and the successful negotiation of a new loan are matters that will require time. In the meantime the treasury is comparatively empty, and the demands of the Government are numerous and pressing. * * * There is a necessity for money, and the object of the authority to issue \$150,000,000 of United States notes is to pay the creditors of the United States and enable them to discharge their debts. The propositions of committees from boards of trade and banks, which recently visited Washington, differed from the theory of this bill so far as to require that instead of the issue of the United States notes the banks should be relied upon to furnish the amount needed. The effect of this would be that the Government bonds must first be disposed of, without restriction as to the rate or terms, taking the notes of suspended banks in payment

of these bonds, and with these bank notes pay off the contractors. The obvious effect of such an arrangement would be to put the reins of our National Government in the hands of the banks. Exactly upon what terms the Government bonds could now be disposed of, no one can say; but last summer, when the banks made their negotiation with the Secretary of the Treasury, they at first refused to do anything because the Secretary was restricted by law to taking par for 7 per cent bonds, payable in twenty years, and for 7.3 Treasury notes payable in three years. They finally decided, with great reluctance, to take \$100,000,000 of the latter, though at the time money was not worth for commercial purposes more than 5 per cent. In the war of 1812 the Government paid for its supplies with funds obtained from the banks in the manner as proposed in the plan recently submitted to the Secretary by those committees. The bonds of the United States were then negotiated in some instances at 20 per cent less than their par value, and paid in bank currency of different degrees of depreciation, according to locality, but averaging from 20 to 25 per cent discount as compared with coin. * * * We shall probably be told that England, in her great struggle while specie payments were suspended, never made paper money a legal tender, * * but instead of doing this she did worse by suspending the laws to enforce payment of debts in cases where the paper money had been refused

as a tender." ("History of Legal Tender Notes," by E. G. Spaulding, p. 54.)

Trustworthy reports from eighteen different States show that in 1860, out of 1,230 banks, 140 were broken, 234 closed, and 131 worthless. There were in existence at that time 3,000 kinds of altered notes, 1,700 varieties of spurious notes, 460 varieties of imitation, and over 700 of other kinds more or less fraudulent. The various kinds of genuine bills in circulation were about 7,000. The use of bank-note detectors was necessary in order to ascertain the genuineness of notes, and the solvency, or the existence even, of the banks of which they purported to be the issue. ("Money and Politics," Upton, p. 112.)

In 1862 all the banks were in a state of suspension. Without a reliable bank-note detector of the latest issue, no one, although an expert, could have discovered whether the "rags and lamp-black" offered to him were worth anything at all or not. Dishonored, depreciated, and doubtful bank notes would have been poor stuff to offer the Union soldier for his blood.

The demand notes were made a legal tender by the act of March 17, 1862. When first issued, although they were receivable for all public dues and were paid in coin on demand, the State banks refused to receive them as current money, because these notes competed with their issues and impaired their monopoly of the paper currency. But they were compelled to accept legal tenders

in payment of debts due them and were thereby forced to treat them as current money. But bankers have never ceased to rail at the greenbacks, because the people get the benefit of this paper circulation, and not them. If they could issue paper money, and greenbacks were not a legal tender, they would soon cease to be bankable, and be thereby crowded out of circulation.

A greenback is a promise to pay dollars without saying when. At first, it meant payment in coin when the Government was able; and the people made it able. Since January 1, 1879, the United States note has meant payment in gold on demand. To the people it was always acceptable, at home or in the field—also to the rebels. Its only enemies were, and are, the friends and issuers of bank notes.

An additional amount of \$150,000,000 in legal tender United States notes was authorized July 11, 1862, of such denominations as the Secretary of the Treasury might deem expedient; but none to be issued for the fractional part of a dollar, and not more than \$35,000,000 of lower denominations than \$5. Not less than \$50,000,000 to be reserved and held to secure prompt payment of the temporary deposits mentioned in the act, and to be issued and used only when needed for that purpose.

By a joint resolution approved January 17, 1863, to provide for the immediate payment of the army and navy, the Secretary of the Treasury

was authorized, if required by the exigencies of the public service, to issue an additional \$100,000,000 of legal tender United States notes, of such denominations not less than \$1 as he may prescribe. This amount was increased to \$150,000,000 by the act of March 3, 1863.

Mr. Lincoln, as President, in giving his approval to this joint resolution, said: "While giving this approval, however, I think it my duty to express my sincere regret that it has been found necessary to authorize so large an additional issue of United States notes when this circulation and that of the suspended banks together have become already so redundant as to increase prices beyond real values, thereby augmenting the cost of living, to the injury of labor, and the cost of supplies, to the injury of the whole country. It seems very plain that the continued issue of United States notes, without any check to the issues of suspended banks, and without adequate provision for the raising of money by loans, and for funding the issues so as to keep them within due limits, must soon produce disastrous consequences. That Congress has power to regulate the currency of the country can hardly admit of a doubt; and that a judicious measure to prevent the deterioration of this currency, by a reasonable taxation of bank circulation or otherwise, is needed, seems equally clear. Independently of this general consideration, it would be unjust to the people at large to exempt banks enjoying the

special privilege of circulation from their just proportion of the public burdens."

Mr. Blaine ("Twenty Years in Congress," Vol. I, Chap. 22) said: "The Secretary of the Treasury had not failed to see that a constant conflict and damaging competition must ensue between the currency of the nation and the currency of State banks. It was the course of the banks more than any other agency that had discredited the demand notes, and demonstrated the absolute necessity of imparting the quality of legal tender to the paper issued by the Government. As this paper took the place of gold and silver in all payments except duties on imports and interest on the public debt, it was easy for the State banks to extend their circulation, which they did to a dangerous extent. The enactment of the legal-tender bill had not, therefore, given the control of the currency to the Government. It had only increased the dangers of inflation by the stimulus it imparted and the protection it afforded to the circulation of State bank notes."

But the war declared by Secretary Chase against this kind of Confederate money was very feebly conducted by him. The National bank act of 1863 imposed a tax of 2 per cent annually on the circulation of National and none on that of State banks; but a similar and lighter tax was imposed on the latter by the act of March 3, 1863. The National bank act of June 3, 1864, taxed both kinds of bank notes alike.

And it was not until the act of March 3, 1865, amendatory to prior internal revenue acts, that a tax of 10 per cent was imposed on the amount of State bank notes paid out after July 1, 1866. Lee surrendered to Grant April 9, 1865, and the war ended soon thereafter.

National Bank Notes. Although a dollar in coin was worth from \$1.28½ to \$1.34 in paper money in December, 1862, Secretary Chase urged his National bank scheme upon Congress, and the bank act of February, 25, 1863, was passed by a small majority. The scheme failed to furnish a market for bonds. Up to December 10, 1863, 134 banks had been organized under the act, chiefly in the West, with an aggregate capital of \$16,000,000. The people took the first five hundred million loan of 6 per cent bonds at par, in paper money, in the summer of 1863. More recently, Mr. Cleveland found that the people could be relied upon to take a loan when directly offered to them.

At the instance of Secretary Chase, the bank act of 1863 was revised, amended, and reënacted June 3, 1864, during which month a dollar in coin was worth from \$1.93 to \$2.50 in paper money. Bank notes not exceeding in amount \$300,000,000 were to be issued to the banks organized under it, they to deposit United States bonds with the Treasurer of the United States, and thereupon receive from the Comptroller of the Currency notes not exceeding 90 per cent of the amount of

the bonds at the par value thereof, if bearing interest at the rate of not less than 5 per cent per annum, such notes to be of denominations of \$1, \$2, \$3, \$5, \$10, \$20, \$50, \$100, \$500, and \$1,000; not more than one-sixth of the notes to be of less denominations than \$5, and, after specie payments were resumed, none to be less than \$5. The notes were made redeemable in lawful money, and also "shall be receivable at par in all parts of the United States in payment of taxes, excises, public lands, and all other dues to the United States, except duties on imports, and also for salaries and *all other debts and demands* owing by the United States to individuals, corporations, and associations within the United States, except interest on the public debt and in redemption of the National currency." It seems, therefore, that Mr. Chase thought a bank note could be made a lawful tender from as well as to the Government, although as Chief Justice he denied the power of Congress to make a United States note a legal tender. The National bank notes were made a forced currency, probably because it was feared that they would not circulate without it.

By the act of July 12, 1870, the limit was increased from three hundred to three hundred and fifty-four millions, and still further by the act of January 14, 1875.

The independent Treasury act of August 6, 1846, proved to be the financial salvation of the Government in the Civil War, which was com-

menced on a specie basis, and duties payable in coin furnished the means to pay interest on the public debt in coin. But by the above-mentioned acts, bank notes redeemable in nothing except greenbacks were bred and nursed in the Treasury, and made a legal tender to and from the Government, as above stated.

Mr. Chase left the Treasury June 7, 1864, and Mr. Fessenden became his successor July 5, 1864. In his report of December 6, 1864, he said: "The necessities of former years have led to many expedients, as is apparent from the diversity of forms which our securities present. As the debt increases from year to year, borrowing becomes more difficult. Embarrassed as the country is with two systems of banking, and obstructed as the Government is by a currency wholly beyond its control, it is manifest that to push its own circulation far, if at all, beyond its present limit, could only be justified by extreme necessity. The returns on file show that the whole circulation of the State banks on January 1, 1864, was \$169,916-129. The total amount issued to National banks, to November 22, 1864, was \$65,160,210. The diminution of State bank issues deducted from the National bank issues left an increase of over \$21,000,000 in bank circulation during the year. Under these circumstances, the Secretary thought it advisable, in order to meet pressing emergencies, to borrow, upon bonds or notes authorized by the different acts referred to, \$50,000,000 of the banks

of the cities of New York, Philadelphia, and Boston, and met the representatives of a large number of these institutions in New York. The result proved, however, that notwithstanding a professed and, as the Secretary was convinced, a reasonable desire to aid the Government, these institutions were not able to furnish the assistance required upon any terms which, under existing provisions of law, the Secretary felt authorized to accept."

The State banks had inflated their suspended paper, and were either unable or unwilling to make a loan of fifty millions on any lawful terms. The State and National banks were then reaping a profit of not less than fourteen millions annually from their circulation. It was choking the channels of circulation to the prejudice of the National cause. Every artifice had been used to keep down inflation by the issue of interest-bearing paper, such as seven-thirty notes, 6 per cent compound interest notes, certificates for temporary loans and of indebtedness bearing 6 per cent interest. The times were critical. During the summer of 1864 Sherman was fighting Johnson among the mountains of Georgia; Grant was fighting Lee on the road to Richmond. In July, 1864, gold reached its highest point, to wit: \$2.85 in paper. Now it is obvious that if there had been no bank notes, and in lieu thereof there had been United States notes, the inflation would have been no greater. This

would have given the Treasury \$235,076,339 of additional funds, bearing no interest. The Secretary would not have felt compelled to apply to a set of shylocks for a loan, and be refused. The nation was fighting for life, and was forced to fight on credit and pay high rates of interest. At the same time the banks were stuffing the currency with their bank notes for private gain, and did this in a great National crisis involving the country's fate. Sherman took Atlanta September 1, 1864, and then marched to the sea. The war was at an end in the spring of 1865.

The Public Debt. The union forces were paid off and mostly discharged during the summer of 1865. The public debt was at its maximum August 31, 1865, to wit: \$2,845,907,605, of which \$1,109,586,191 was in funded debt; about a million and a half in matured debt; something over two millions in suspended requisitions, and the residue was:

United States legal-tender notes.....	\$ 433,160,569 00
Compound interest legal-tender notes.....	217,024,160 00
Five per cent legal-tender notes.....	33,954,230 00
Seven-thirty notes.....	830,000,000 00
Fractional currency.....	26,344,742 51
Temporary loans.....	107,148,713 16
Certificates of indebtedness.....	85,093,000 00
Total floating debt.....	\$1,732,725,414 67

("United States Notes," Knox, Chap. 9.)

On June 30, 1865, there was in circulation State bank notes to the amount of \$142,919,638, and National bank notes to the amount of \$146,137,860; total of bank notes, \$289,057,498 (Statistical

Abstract of the United States for 1887, p. 22), all of which were redeemable in nothing unless in greenbacks. No one can doubt that these bank notes inflated and depreciated the currency quite as much as the same amount in United States notes would have done.

Contraction. Mr. Fessenden had been succeeded by Mr. McCulloch as Secretary of the Treasury. He had been a banker in Indiana; also Comptroller of the Currency under the bank act of 1864, and was an ardent promoter of the National bank scheme, and an enemy of greenbacks. In his report of December 4, 1865, he said: "The reasons sometimes urged in favor of United States notes as a permanent currency are the saving of interest and their perfect safety and uniform value. The objections to such a policy are that the paper circulation of the country should be flexible, increasing and decreasing according to the requirements of legitimate business, while if furnished by the Government it would be quite likely to be governed by the necessities of the Treasury or the interest of parties rather than the demands of commerce and trade." And he was urgent to have power given him to sell interest-bearing bonds for the purpose of retiring greenbacks, and by the act of April 12, 1866, was authorized to retire ten millions within six months, and thereafter at the rate of four millions a month.

On and after August 31, 1865, there was a float-

ing debt of over \$1,273,000,000, two-thirds of which bore interest at 7.3 per cent per annum, and the residue at 6 per cent, excepting a small amount bearing interest at 5 per cent. This mass of matured and rapidly maturing indebtedness was large enough to keep any ordinary financier quite busy in funding it. Probably the interest-bearing legal-tender notes furnished an attractive reserve for his pet banks.

But the retiring of greenbacks was stopped, and finally, by an act of May 31, 1878, it was provided that it should not be lawful for the Secretary of the Treasury, or other officer under him, to cancel or retire any more of the United States legal-tender notes; and when the same may be redeemed or received into the Treasury under any law or from any source whatever, and shall belong to the United States, they shall not be retired, canceled and destroyed, but they shall be reissued and kept in circulation; new notes to be issued for mutilated ones, which were thereupon to be canceled and destroyed. Their amount then was and now is \$346,681,016, less the amount lost or destroyed by use and accident.

On June 30, 1878, National bank notes amounted to \$324,514,284, and on June 30, 1882, had increased to \$358,742,034 (Statistical Abstract for 1887, p. 22).

During the war and since, the people were taxed to pay interest in gold on the bonds held to secure payment of these notes in greenbacks, and

in addition the banks have reaped a profit annually of millions upon the notes in discounting commercial paper, in consideration of which these banks have assisted in inflating and depreciating the currency. Also a bureau was erected in the Treasury, with a Comptroller of the Currency at its head, for the purpose of nursing and managing this unjust scheme.

The average circulation of the State and National banks taken together, from 1862 to 1890, was over three hundred millions of dollars. If their place had been occupied by United States notes, the paper inflation would have been no greater during the war, and the resumption of specie payments afterward would have been quite as easy. The limit of paper inflation was fast approaching in 1864, and it is obvious that the risk of financial collapse would have been less if State bank notes had been taxed out of existence immediately after 1861 and no National bank notes had been issued. By using the above additional amount of their own notes during the above period, the people would have saved in interest on debt, at 4 per cent only, payable quarterly and compounded, over five hundred and seventy-five millions of dollars.

Elasticity. The advocates of bank notes insist that a currency ought to be elastic, "increasing and decreasing according to the requirements of legitimate business," provided, however, the issuers of the notes possess the exclusive power

to work the "elasticity," and to decide what business is legitimate. This and other arguments in favor of bank notes are frivolous; the profit which can be made on them is the real "milk in this cocoanut." For example, if National banks, as in 1882, can lend or exchange \$358,742,034 of their bank notes bearing no interest, for commercial paper at the current rate of bank discount, then their annual profit, assuming it to be 6 per cent, is \$21,524,522, less a tax of 1 per cent per annum on the notes, and which is deemed by them to be a grievous burden. The money which the notes represent is in Government bonds, and is also drawing interest.

But these National bank notes are too "inelastic" to suit the advocates of bank notes. They want to issue a "credit" currency, say not less than \$3 in paper for one in specie, actually or theoretically held in reserve for their redemption. They want to draw interest upon three or more dollars, all of which are wind except the dollar in specie held for their redemption, or supposed so to be.

Mr. Biddle, president of the Second Bank of the United States, understood elasticity quite as well as Mr. McCulloch. There was great rivalry between this bank and the State banks as to which should supply and control the paper circulation of the country. And Mr. Biddle, probably for the benefit of the State banks, published in April, 1828, an essay in answer to the question:

What is the cause and nature of the present scarcity of money? His answer being, in substance, overtrading brought on by overbanking. He said: "The constant tendency of banks is to lend too much and to put too many notes in circulation, which causes a rise in the price of commodities. This causes large importations, while the high price of domestic products prevents their exportation. When you buy more from foreigners than they buy from you, as they can not take the paper part of your currency they must take the coin part. If a bank lends its money for long terms and to persons careless of protests, it runs great risk; on the one hand its notes are payable on demand, while on the other its debts can not be called in without great delay. But a well-managed bank has its funds mainly on short loans to persons in business, payable on a day named, which the parties are able to pay and will pay at any sacrifice in order to escape mercantile dishonor. Such a bank has its funds constantly repaid to it and is able to say whether it will or will not lend them out again. Such a bank, when it finds there is too much demand for coin, declines to renew the loans of its debtors. Thus they are obliged to return the bank notes lent them or their equivalents. This makes bank notes scarcer and more valuable—this makes goods less valuable—the debtors in their anxiety to get bank notes sell their goods at a sacrifice—this brings down prices and makes everything

cheaper, and finally stops importations, the demand for coin," etc. ("Gouge on Banking," published in 1833, Part II, p. 189.)

According to Mr. Biddle, an elastic currency first expands by liberal issues of bank notes; prices rise, inducing importation and preventing exportation; speculation is rife, and everybody flies high on the wings of credit. But the exportation of coin puts a limit to the expansion; the bag of wind becomes liable to explode. Then the "well-managed banks," who have made their loans on short time to men who will pay at any sacrifice, insist upon payment and refuse to renew their loans. The elastic currency contracts, prices fall, debtors force their goods on the market and impoverish themselves to meet their notes; but the "well-managed banks" get out with whole skins, while their customers are flayed alive. The other banks suspend payment and many of them prove to be insolvent; their notes fall to discount or become worthless. According to the ethics of banking, the only suspension of payment which is justifiable under any state of facts whatever is a bank suspension.

Mr. Biddle also said: "The substitution of credits for coin enables the nation to make its exchanges with less coin, and of course saves the expense of coin." If the "credits" were in the form of United States notes the nation might make the saving, but when the "credits" are in the form of bank notes the banks make it. These

printed pieces of paper cost them a nominal sum, but cost the borrower and those who otherwise acquire them the same as coin. The banks charge the same interest on them as if the loan were made in coin. After money is made artificially scarce, as above, all the debtor can hope for is to save his name and credit from dishonor by the sacrifice of his property; if he does not sell it himself the sheriff will finally do it for him. When the banks, the Second United States Bank included, suspended specie payment, the nation enjoyed the benefit of a currency consisting of bank notes at a variable discount, depending upon the supposed solvency of the bank issuing it, and thereby, perhaps, saved the expense of coin altogether.

As shown by Mr. Biddle, no matter how many notes banks are authorized to issue, if they are loaned on long time or to persons who are unable or unwilling to pay their debts when due, the currency is not elastic, for that quality includes contraction as well as expansion. The present National banks thrust their notes into the currency when received, as far away from home as possible, and cry for more; they also lend out as large a per cent of their deposits as the law will allow; therefore, in the direction of expansion, the present currency is quite elastic. But unless their loans are made on short time to persons who will pay at any sacrifice, the currency is inelastic in the direction of contraction. When

they have brought on, or made imminent, a financial panic by lending too large a per cent of their deposits on long or short time, with a narrow margin on the collaterals, and have surrounded themselves with flocks of lame ducks, they expect the Jupiter who officiates as the Comptroller of the Currency to nod and to wink at their bogus clearing-house certificates. If these institutions would hold their notes in reserve for such an emergency, the sudden expansion of the currency at that time by their issue might avert the impending panic brought on by their excessive greed.

The 10 per cent tax on State bank circulation exterminated State bank notes, but not State banks. These banks are not obliged to report to the Comptroller of the Currency. But from his report for 1896, Vol. I, p. 16, the condition of 3,705 State banks reporting to him showed the following items: Capital, \$240,133,835; deposits, \$695,659,914; loans, \$702,505,798; stocks and bonds, \$97,234,561; also, 1,195 State banks, with an aggregate capital of \$87,985,913, reported dividends paid of \$5,985,222, the average being 6.8 per cent; also, loan and trust companies to the number of 115, with capital of \$52,715,402, paid dividends amounting to \$5,254,200, an average of 9.9 per cent. Of the savings banks 1,299 reported deposits, \$1,935,466,468, of which \$1,907,156,277 were savings deposit accounts; loans, \$1,055,187,769; United States bonds, \$148,525,375; other bonds

and stocks, \$756,676,312; surplus and undivided profits, \$174,714,993. Such is the showing of these concerns during a period of hard times ensuing the panic of 1893. There are also numerous private banks, some of them very large, e. g. the leading exchange houses.

This statement proves that it is not necessary to hire people, with or without capital of their own, to engage in the legitimate business of banking, by authorizing and assisting them to establish paper-money factories to be operated in competition with the Government mint.

The proper office and function of a bank is to reduce the currency and not to increase or dilute it. Having a capital in money not of its own manufacture, others deposit money with it, relying upon its solvency. There is a book account between it and each of its customers, each of whom, to the extent of his credit, can purchase property and pay his debts by checks and bills drawn on the bank. These are deposited by those who receive them with the same or some other bank. The various banks settle their respective claims upon each other by an exchange of the checks and drafts drawn on them respectively, paying any balances in money, which are usually merely nominal sums. Thus the great mass of moneyed transactions are settled by an adjustment of mutual accounts. Great financial centers operate as clearing houses for large districts of country, New York being the financial

center for this country, and London for Great Britain, and indeed for the whole commercial world. By the legitimate use of credit, banks facilitate exchanges and thereby greatly reduce the quantity of money which would be otherwise required. The more metallic the currency the better fitted it is as a basis for these credit transactions. The preëminence of London as the great financial center is largely due to the fact that a debt payable there is certain to be paid, if at all, in gold coin of a fixed weight and fineness.

A bank with an actual capital of its own and the average amount of its deposits has an adequate fund to operate with. In fact, such banks eagerly solicit deposit accounts, and many of them pay interest thereon, thereby paying depositors a bonus for the privilege of keeping their money safely and paying it to them on demand, or at least agreeing to do it. The profits are so great that a law is necessary to prevent them from lending too large a per cent of their deposits, and a law to prevent them from paying interest on deposit balances which are payable on demand would probably be beneficial. A bank which can not make a profit out of its actual capital and deposits has no right to exist.

Fractional Paper Currency. By the summer of 1862 the paper inflation caused the fractional silver coins to disappear from circulation. Under the coinage act of 1853 their bullion value was about 7 per cent less than standard coin. Postage

and other United States stamps were made fractional currency, in lieu of which fractional notes were authorized by act of March 3, 1863. In 1877 the premium on specie had fallen so that fractional silver coins could be and were substituted for the fractional notes.

The population of the United States in 1860 was 31,443,321, of which, in 1861, about one-third were in rebellion, so that the currency required, under the facts then existing, was for a population of about twenty-one millions; in 1865, for a population of about thirty-four millions; in 1870, for a population of 38,558,371; in 1880, for a population of 50,155,783.

The inflation of the currency excluded coin; the contraction of the currency reduced prices so that specie payments could be and were resumed January 1, 1879, at which time and since greenbacks have been redeemed in coin (gold) on presentation for that purpose at the office of the Assistant Treasurer of the United States in the city of New York, in sums not less than \$50.

The paper inflation during the war caused prices to rise, i. e., the exchange value of money to fall. The Government was a great employer, buyer, and consumer; wages were high, also commodities. The ranks of the army could be filled by paying large bounties, after the ardor for volunteering was past. But after the war was ended the case was reversed. The Government no longer needed an immense army and navy. Con-

traction involves falling prices, failing debtors, and a decrease in the army of speculators. No financier has ever invented a successful financial scheme which will cause prices forever to rise and never to fall or collapse. A money inflation produces financial intoxication, which, after the "spree" is over, results in reaction, stagnation, collapse, and the blue devils. After the panic of 1873, an inflation of the paper currency was prevented by a veto from President Grant.

A single gold standard was adopted by the act of February 12, 1873, "revising and amending the laws relative to the mints, assay offices, and coinage of the United States." It authorized certain coins therein named, and none other; the standard silver dollar was not one of them. Its metallic value then was a little more than a dollar in gold, the commercial ratio of silver to gold then being 15.92 to 1. This act adopted a policy which had its inception in the act of 1834 and declared the gold dollar of the standard weight of 25.8 grains to be the unit of value.

The coins thereby authorized, and still issued, are:

Gold. Double eagle, eagle, half eagle, quarter eagle.

Silver. Half dollar, quarter dollar, dime.

Nickel. Five-cent piece—75 per cent copper and 25 per cent nickel.

Bronze. Cent—95 per cent copper and 5 per cent tin and zinc.

The provisions relating thereto as contained in the revised statutes of 1874 are chiefly as follows:

The standard for both gold and silver coins is nine-tenths fine.

The standard weight of the double eagle, or twenty-dollar piece, is 516 grains; of the other gold coins in proportion; of the half dollar, 12½ grams (192.9 grains); of the quarter dollar and dime, in proportion thereto.

Tolerance. No ingots to be used for coinage which shall differ from the legal standard more, in gold ingots, than 0.001; silver ingots, 0.003; five-cent piece, 0.025, in the proportion of nickel. In adjusting the weight of the coins the following deviations shall not be exceeded in any single piece: In the double eagle and eagle, half a grain; half and quarter eagle, one-fourth of a grain; half and quarter dollar and dime, one and one-half grains; five-cent piece, three grains; cent, two grains.

Devices and Legends. On one side there shall be an impression emblematic of liberty, with an inscription of the word "Liberty" and the year of the coinage, and upon the reverse shall be the figure or representation of an eagle, with the inscriptions "United States of America" and "E Pluribus Unum," and a designation of the value of the coin; but on the dime, five and one cent pieces the figure of the eagle shall be omitted.

Legal Tender. No foreign gold or silver coin shall be a legal tender in payment of debts.

The gold coins of the United States shall be a legal tender in all payments at their nominal value when not below the standard weight and limit of tolerance provided by law for the single piece, and when reduced in weight below such standard and tolerance, shall be a legal tender at valuation in proportion to their actual weight.

The silver coins of the United States shall be a legal tender at their nominal value for any amount not exceeding five dollars in any one payment; since raised, as to the fractional silver coins, to ten dollars.

The minor coins of the United States shall be a legal tender, at their nominal value, for any amount not exceeding twenty-five cents in any one payment.

Abrasion. Any gold coins of the United States, if reduced in weight by natural abrasion not more than one-half of 1 per cent below the standard weight prescribed by law, after a circulation of twenty years, as shown by the date of coinage, and at a ratable proportion for any period less than twenty years, shall be received at their nominal value by the United States Treasury and its officers, under such regulations as the Secretary of the Treasury may prescribe for the protection of the Government against fraudulent abrasion or other practices.

Any gold coins in the Treasury when reduced in weight by natural abrasion more than one-half

of 1 per centum below the standard weight prescribed by law, shall be recoined.

The coinage of standard gold bullion is free and gratuitous (act of January 14, 1875). The coinage of the fractional silver and minor coins is done on Government account.

The minor coins are redeemed at the Treasury and its offices in lawful money when presented in sums of not less than twenty dollars; when it appears therefrom that the amount outstanding is redundant, the Secretary of the Treasury is required to direct that their coinage shall cease until otherwise ordered by him.

The fractional silver coins are redeemed in lawful money at the office of the Treasurer or any Assistant Treasurer when presented in sums of twenty dollars or any multiple thereof, and are exchanged in like manner for lawful money on demand. (Act of June 9, 1879.)

The value of foreign coin, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value; and the values of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint and be proclaimed on the first day of January by the Secretary of the Treasury. In all payments by or to the Treasury, whether made here or in foreign countries, when it becomes necessary to compute the value of the sovereign or pound sterling, it shall be deemed equal to

\$4.8665, and the same rule shall be applied in appraising merchandise imported where the value is, by the invoice, in sovereigns or pounds sterling, and in the construction of contracts payable in sovereigns or pounds sterling; and this valuation shall be the par of exchange between Great Britain and the United States.

The weights of the metric system were legalized.

The following coins have been issued at various times and their coinage afterward discontinued:

Gold. Dollar, three-dollar piece.

Silver. Trade dollar, twenty-cent piece, half-dime; three-cent piece.

Nickel. Three-cent piece, cent.

Bronze. Two-cent piece.

Copper. Cent, half-cent.

The Silver Dollar. By the act of February 28, 1878, "To authorize the coinage of the standard silver dollar, and to restore its legal-tender character," it was provided: "There shall be coined, at the several mints of the United States, silver dollars of the weight of 412.50 grains troy of standard silver, as provided in the act of January 18, 1837, on which shall be the devices and superscriptions provided by said act; which coins, together with all silver dollars heretofore coined by the United States, of like weight and fineness, shall be a legal tender, at their nominal value, for all debts and dues, public and private, except where otherwise expressly stipulated in the contract. And the Secretary of the Treasury

is authorized and directed to purchase, from time to time, silver bullion at the market price thereof, not less than two million dollars' worth per month nor more than four million dollars' worth per month, and cause the same to be coined monthly, as fast as so purchased, into such dollars;" any gain or seigniorage arising from this coinage shall be accounted for and paid into the Treasury. Certificates for gold coin and bullion deposited in the Treasury were not to be paid in silver dollars.

This act also provided that any holder of silver dollars might deposit the same with the Treasurer or any Assistant Treasurer of the United States in sums not less than \$10 and receive therefor certificates of not less than \$10 each, corresponding with the denominations of the United States notes. The coin deposited for or representing the certificates shall be retained in the Treasury for the payment of the same on demand, such certificates to be receivable for customs, taxes, and all public dues, and, when so received, may be reissued. By the act of August 4, 1886, the issue of silver certificates of the denominations of one, two, and five dollars were authorized.

The coinage act of January 18, 1837, provided that no silver ingots should be used for coinage of which the quality differs more than three-thousandths from the legal standard (i. e., nine-tenths fine); and in adjusting the weights of the coins, the following deviations from the standard weight shall not be exceeded in any of the single

pieces: in the dollar, one grain and a half. Perhaps, therefore, under the act of February 28, 1878, a silver dollar is a legal tender, provided its fineness is not less than 0.897, and its weight not less than 411 grains.

By the act of July 14, 1890, the Secretary of the Treasury was directed to purchase, from time to time, silver bullion to the aggregate amount of four million five hundred thousand ounces, or so much thereof as may be offered in each month, at the market price thereof, not exceeding \$1 for $371\frac{1}{4}$ grains of pure silver, and to issue in payment of such purchases of silver bullion, Treasury notes of the United States, to be prepared by the Secretary of the Treasury, in such form and of such denominations, not less than \$1 nor more than \$1,000, as he may prescribe, which notes shall be redeemable in coin at the Treasury of the United States or at the office of any Assistant Treasurer of the United States, and when so redeemed may be reissued, but no greater or less amount of such notes shall be outstanding at any time than the cost of the silver bullion and the standard silver dollars coined therefrom then held in the Treasury purchased by such notes, which notes shall be a legal tender in payment of all debts, public and private, except otherwise expressly stipulated in the contract, and shall be receivable for customs, taxes, and all public dues, and when so received may be reissued. That on demand of the holder of any of the said notes

the Secretary of the Treasury shall, under such regulations as he may prescribe, redeem them in gold or silver coin, at his discretion, it being the established policy of the United States to maintain the two metals on a parity with each other upon the present legal ratio, or such ratio as may be provided by law. That the Secretary of the Treasury shall each month coin two million ounces of the silver bullion purchased under this act, into silver dollars, until July 1, 1891, and after that time he shall coin as much of the bullion as may be necessary to provide for the redemption of the Treasury notes herein provided for, any gain or seigniorage arising from such coinage to be accounted for and paid into the Treasury, the purchase clause of the act of February 28, 1878, being, by this act, repealed. By the act of November 1, 1893, the purchase clause of the act of July 14, 1890, was repealed, it being also stated that it is hereby declared to be the policy of the United States to continue the use of both gold and silver as standard money, and to coin both gold and silver into money of equal intrinsic and exchangeable value, such equality to be secured through international agreement, or by such safeguards of legislation as will insure the maintenance of the parity in value of the coins of the two metals, and the equal power of every dollar at all times in the markets and in the payment of debts. And it is hereby further declared that the efforts of the Government should be steadily directed to

the establishment of such a safe system of bimetallism as will maintain at all times the equal power of every dollar, coined or issued by the United States, in the markets and in the payment of debts.

Gold Certificates. By the act of July 12, 1882, the Secretary of the Treasury was authorized and directed to receive deposits of gold coin with the Treasurer or assistant treasurers of the United States in sums not less than \$20, and to issue certificates therefor in denominations not less than \$20 each, corresponding with the denominations of the United States notes. The coin deposited for, or representing, the certificates of deposits shall be retained in the Treasury for the payment of the same on demand, which shall be receivable for customs, taxes, and all public dues, and when so received may be reissued; also that the Secretary of the Treasury shall suspend the issue of such certificates whenever the gold coin held in the Treasury reserved for the redemption of United States notes falls below \$100,000,000.

The money of the United States, on July 1, 1896, according to the report of the Treasury Department, consisted of:

Gold coin	\$567,931,823
Silver dollars	430,790,041
Fractional silver coin	75,730,781
United States notes	346,681,016
Treasury notes	129,683,280
National bank notes	226,000,547
<hr/>	
Total	\$1,776,817,488

To which add the nickels and cents. The Treasury held \$111,803,340 in gold, of which \$42,818,189 was represented in circulation by gold certificates. The various banks and banking concerns held about \$300,000,000, and the residue was estimated as held among the people, gold coin being rarely seen in circulation, unless in California.

The silver dollars, excepting about sixty millions, were represented in circulation by silver certificates. Experience proves that less than one silver dollar per unit of population is all that can be kept in circulation; any excess is returned to the Treasury and certificates taken out instead. The free coinage of silver signifies a currency of silver certificates with the silver warehoused in the Treasury; without them the people would not tolerate a bulky currency of silver dollars.

The fractional silver and minor coins being necessary in any case, in commenting on the currency they may be omitted.

The quantity of United States notes is a fixed amount, which is probably diminished by loss from use and accident.

The quantity of Treasury notes decreases as the silver purchased by them is coined into dollars.

The National bank notes are a variable quantity, and are redeemable in lawful money at the bank of issue; also at the Treasury in United States notes, when presented for redemption in

sums of \$1,000 or any multiple thereof. In October, 1896, there were 3,679 National banks; also 4,944 State banks and trust companies; 764 (State) savings banks, and 3,552 private banks. (Report of the Comptroller of the Currency for 1896, Vol. I, p. 33.) As only National banks can issue bank notes, their issue is no essential part of the banking business, for otherwise all State and private banks would have died out.

The above statement shows that the money of the United States consists of about one-third standard gold coin and two-thirds paper and silver dollar tokens, the bullion value, in 1897, of the silver dollar being less than one-half its nominal or legal-tender value.

During the administration of Mr. Cleveland there was a great demand for gold, caused by the inflated condition of the currency, the proposal indorsed by him to repeal the 10 per cent tax on State bank notes, and the renewed agitation for free silver. Owners of foreign capital wanted to remove it from the country, and home capitalists preferred gold coin to silver dollars or bank notes redeemable in them, and followed the example set by the banks of hoarding gold. This demand fell on the gold reserve held by the Government for the redemption of the United States and Treasury notes, gold not being obtainable in exchange for silver dollars, silver certificates, or bank notes. During the fiscal years 1895 and 1896 the net export of gold exceeded \$109,000,000.

The Secretary of the Treasury (Mr. Carlisle), in his December, 1894, report, said, concerning the demand for gold: "With a current revenue inadequate to defray the ordinary current expenses, and practically no receipts of gold from customs or other sources, it was evident that the Treasury would be unable to meet even the usual demand for export, which, however, would probably be much augmented by the increased apprehension produced by the depleted condition of the reserve."

The "usual demand for export" arose and arises from stuffing the currency with tokens. If the act of July 14, 1890, for the purchase of fifty-four million ounces of silver bullion per annum had not been, providentially, repealed November 1, 1893, there would have been added to the already overstock of silver, by November 1, 1897, two hundred and sixteen million ounces, which would make, when coined, \$278,640,000 in silver dollars. A repeal of the 10 per cent tax on State bank notes would have flooded the already inflated currency with that kind of paper tokens. The free coinage of silver would have dumped an immense quantity of that material into the already bloated currency.

There were "*practically no receipts of gold from customs or other sources*" because silver dollars, silver certificates, and Treasury notes were payable and paid for duties on imports, and other revenues were payable in silver dollars, silver

certificates, National bank notes, Treasury notes, and greenbacks, and paid in them, greenbacks and Treasury notes excepted.

Secretary Carlisle, in his December (1896) report, said the excess of expenditures during the three fiscal years 1894-5-6 over the receipts from the ordinary sources of revenue was \$137,811,729.46. And he estimated a deficit for the fiscal year 1897 of \$64,500,000; and for the fiscal year 1898 of \$45,718,970.60. He also said therein: Since March 1, 1893, United States bonds to the amount of \$262,315,400 have been issued and sold for \$293,481,894.90 in gold. Also that: Since the resumption of specie payments on January 1, 1879, United States notes to the amount of \$470,490,987, and Treasury notes issued under the act of 1890 to the amount of \$86,428,881, have been redeemed in gold.

The \$262,315,400 of bonds were issued and sold under the resumption act of January 14, 1875, to replenish the gold reserve; the United States and Treasury notes redeemed were reissued in payment of expenditures, and thus the deficit in the revenue was made good. By the sale of these bonds a suspension of payment of all kinds of demands in any kind of money was avoided. The great demand for gold to export and to hoard was a godsend to this low-tariff administration.

If gold is bought for redemption purposes and to maintain the gold standard, and Government notes are redeemed in gold, and the notes there-

upon are paid out for expenditure, there is nothing to be charged to the notes as cost for their redemption.

In 1877 and 1878 ninety millions of bonds were sold for gold which was held for resumption purposes ("Money and Politics," Upton, pp. 150-52), ("United States Notes," Knox, p. 141). And no more bonds were sold for resumption purposes until those issued and sold by Secretary Carlisle as above mentioned.

The gold reserve January 1, 1879, proved to be unnecessarily large. At that date the amount of coin held in the Treasury as available for resumption purposes, after deducting all matured coin liabilities, was \$135,000,000; and during that entire year only \$11,456,536 in legal-tender notes were presented for redemption ("Money and Politics," Upton, p. 155).

The receipts from customs (coin) during the fiscal year 1864 were \$102,316,152.99; in 1866, \$179,046,651.58; in 1867, \$176,417,810.88 ("McPherson's History of Reconstruction," p. 375). By the act of March 17, 1864, the Secretary of the Treasury was authorized to anticipate the payment of interest on the public debt by a period not exceeding one year, either with or without a rebate of interest on the coupons, as to him might seem expedient; also, to dispose of any gold in the Treasury not necessary for the payment of interest on the public debt, etc. Sales of gold

were thereafter frequently made during and after the war.

Whether legal-tender notes were redeemed on and after January 1, 1879, with coin received from customs or with coin belonging to the gold reserve, and the notes reissued in payment of expenditures, there is no proper charge to be made against them for the cost of their redemption. Suppose the reserve held for resumption purposes was originally intended to be, and in fact was, \$100,000,000; to this add \$293,481,894.90 realized by Secretary Carlisle from the bonds sold by him; there ought to be now in the Treasury a gold reserve of \$393,481,894.90, for all the United States notes are still outstanding; also all of the Treasury notes which have been redeemed in gold. But the fact is, that not only the whole of the original gold reserve, but also that added to it by Secretary Carlisle, except the part of it which may still remain in the Treasury, has been used in payment of current expenses, in this way, to wit, United States and Treasury notes being redeemed in gold have been reissued and paid out in discharge of Government dues.

Whatever charge is proper against the United States notes on account of the gold reserve, no charge can be made against them for any part of the \$86,428,881 paid out in gold for the redemption of Treasury notes. Secretary Carlisle said: "Since the resumption of specie payments in January 1, 1879, United States notes to the amount

of \$470,490,987 have been redeemed in gold," i. e. to December, 1896. How can this be, for the gold reserve proper is not over \$100,000,000?

By the act of February 28, 1878, for the coinage of silver dollars, only twenty-four million dollars' worth of silver bullion was coined per annum, so that for a long period of time duties on imports were paid almost entirely in gold. But as time elapsed the quantity of silver dollars and silver certificates increased, and also the part of the customs paid in them. By the act of July 14, 1890, four and one-half million ounces of silver bullion were to be and were purchased monthly, and Treasury notes issued therefor, which notes were also receivable for customs, so that by 1893, as Secretary Carlisle said, there were "practically no receipts of gold from customs or other sources." According to his reports for 1894 and 1896, the receipts from customs were, for the fiscal years—

1893-----	\$203,355,016	73
1894-----	131,818,530	62
1895-----	152,158,617	45
1896-----	160,021,751	67

Suppose these amounts had been paid in gold, or chiefly in gold, as duties were in 1879 and for a long time thereafter, legal-tender notes could have been redeemed with the gold, and the notes thereupon paid out for Government dues continually and to very large amounts. But by stuffing the currency with bank notes, Treasury notes, silver dollars, and silver certificates, the

Government has been put into the condition that if gold is demanded on any liability which is payable in coin—e. g., funded debt, interest thereon, etc.—the gold must be bought or payment in gold refused, for an exchange of Treasury notes and greenbacks for gold is an unreliable makeshift. The evil day was only deferred by the repeal of the silver purchase act of 1890, and the purchase of \$293,481,894.90 in gold by Secretary Carlisle.

The redeeming and reissue (in payment of expenses) of the legal-tender notes was called by Mr. Cleveland “an endless chain,” which worked well for him. But as he believed that his successor by, e. g., a McKinley bill, would raise a revenue sufficient to pay expenses, he recommended, as a parting bequest, the withdrawal and cancellation of the legal-tender notes, at which suggestion the whole banking fraternity pricked up their ears. For, with an adequate revenue, the notes could not be reissued after their redemption (unless they were given away). This great void in the currency might be filled with bank notes, but the free silver party think it might be filled with silver dollars, and if bank notes were suppressed that void also might be filled with the same metal.

Perhaps if the currency were let alone, the country might eventually grow out of its present financial slough of despond. But if it is to be doctored in order to make it “sound,” and a

money commission composed of experts is to be appointed to suggest the proper method, perhaps it would be judicious to have such commission composed one-half of bankers and the other half of free silverites.

When the Government "goes out of the banking business," by withdrawing the United States and Treasury notes, e. g., by funding them, it will be necessary also to abolish the currency bureau, and repeal the act making bank notes a legal tender to and from the Government. When gold is needed to pay interest or principal of the public debt, or for any purpose requiring it, the gold must, as now, be bought.

Those engaged or ready to engage in "the banking business" of issuing paper money insist that a "sound" currency might and ought to consist of bank notes redeemable in "lawful money." With the Government notes out of the way this would be gold coin and silver dollars. If the bank notes were made redeemable in gold coin only, that would violate "the established policy of the United States to maintain the parity between the two metals." Supposing the currency to consist of one-third standard coin and two-thirds bank notes; there is already a sufficient or nearly sufficient stock of silver for the purpose. For there was purchased and coined under the act of February 28, 1878, 291,272,018.50 fine ounces, and under the act of July 14, 1890, 168,674,682.53 fine ounces (Mint Report of 1895, p.

209). These amounts taken together are sufficient to coin into \$594,665,089 in silver dollars.

The advocates of free silver think that a "sound" and simple currency might and should consist of silver dollars and silver certificates. It is quite obvious that a silver certificate is quite as "elastic" as a bank note for the same amount.

Instead of the present mongrel currency, the money of the United States might have consisted of two-thirds gold coin and one-third United States notes. There was coined at the mints of the United States from January 1, 1873, to June 30, 1896, \$1,020,722,143 in gold coin, which, with a part of the \$793,970,110 coined prior to 1873, would have been quite sufficient for the purpose. In such case any demand for an additional quantity of paper money for use in active circulation could have been supplied by additional issues of United States notes for a like amount in gold coin deposited in the Treasury. This coin would have been quite sufficient to redeem all the notes which would ever have been presented for that purpose. The United States, Treasury, and National bank notes outstanding July 1, 1896, amounted to \$702,364,843, to which add the silver and gold certificates to ascertain the amount of paper money then extant. With a currency as above, the "endless chain" would have needed no lubrication. Also, a greenback is as "elastic" as a bank note for the same amount.

If the gold standard is to be maintained the

National bank notes ought to be suppressed; State bank notes kept so; no more silver dollars coined; and the present stock of them and of uncoined bullion recoined at the commercial ratio. There is at present more than 100 per cent profit in coining silver dollars and shipping them into the country. And this practice has commenced on quite a large scale. (Report of the Director of the Mint for 1896, p. 111.)

In the interest of a bank-note currency it is insisted that while United States notes are good, and of a uniform value at all times and places, yet, like many other good things, they are too expensive. And to magnify this, the endless chain argument has been worked to an absurd extent by persons high in office, as see Report of the Comptroller of the Currency for 1896, p. 108. The United States notes being still outstanding, the gold reserve held for their redemption ought to be in the Treasury in its entirety, no matter how often the notes have been redeemed, unless on their reissue they were given away. As before stated, the original gold reserve consisted of the proceeds of the sale of bonds to the amount of \$90,000,000, of which \$65,000,000 bore interest at $4\frac{1}{2}$ per cent, and \$25,000,000 at 4 per cent. The $4\frac{1}{2}$ per cents were sold at $1\frac{1}{2}$ per cent premium, the 4 per cents at par. The interest annually on the \$90,000,000 was \$3,925,000. From January 1, 1879, to January 1, 1897, is eighteen years, for which period

the above annual interest amounted to \$70,650,000. If the greenbacks had been funded January 1, 1879, to wit, \$346,681,016 into \$250,000,000 of 4½ per cents and \$96,681,016 into 4 per cents, the people would have been taxed annually the interest on these sums, to wit, \$15,117,240.64, which in eighteen years make an aggregate \$272,109,331.62. Deducting from this the interest paid on the ninety millions of bonds, to wit, \$70,650,000, leaves \$201,459,331.62 as the amount saved by the people during the eighteen years by using their own notes for money. And a much greater amount than this would have been saved if United States notes had occupied the place of the National bank notes. For the currency would have been no more inflated with paper money, and no greater gold reserve would have been required to maintain the gold standard. All of the legitimate banking business would have been done by State and private banks, issuing no paper tokens. Since March 3, 1883, the National banks have paid a tax of 1 per cent annually on their circulation, and before and since that time they have paid no other taxes than have been charged to other banks, nor have they performed any services for the Government which such other banks could not have rendered and gained a large profit thereby.

It is about time for the Government to regulate the value of money by furnishing the whole of it, either gold coin and paper representing it or

silver coin and paper representing it. No bank notes are needed in either case. Bimetallism is impossible except at the commercial ratio, and that has become so variable that no one nation can now control it.

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